FINANCIAL HISTORY

The magazine of the Museum of American Finance

"The Fed at 100" Exhibition Opens

Central Banking and the Incidence of Financial Crises

The Phantom New Jersey Stock Exchange

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Images from "The Fed at 100" exhibition. See related articles, pages 5, 16 and 20.

Image credits: Federal Reserve Bank of New York, Curating Section; Federal Reserve Bank of Richmond; Museum of American Finance; and Chris and Lucy Widness.

MoAF Opens Largest Exhibition to Date and Announces 2014 Whitehead Award Recipient

Message to Members

David J. Cowen | President and CEO

The Museum is proud to have launched its largest exhibition to date with "The Fed at 100." Our exhibit team of Maura Ferguson and Becky Laughner, aided by Kristin Aguilera, Sarah Buonacore and Harley Spiller, bring to life in an understandable and entertaining manner an institution that has mystified many over the years. The team was ably assisted by two stellar economic historians, our chairman Professor Richard Sylla and banking historian Professor Eugene White.

The stars were out opening night as the president of the Federal Reserve Bank of New York, William Dudley, addressed the crowd of many current and former Fed officials, including two former New York Fed presidents. Other luminaries in attendance that evening included the recent central bank leaders of the Bank of England, Mervyn King, and the Bank of Israel, Stanley Fisher, as well as the Fed's first female officer, Madeline McWhinney.

Our sincerest thank you goes out to the New York Fed, and in particular the curatorial section led by Rosemary Lazenby. She and her colleagues of Campbell Cole, Steven Vella and Marja Vitti were indispensable in answering our questions, as well as arranging for object loans and interviews with the Fed staff. As the longest-serving Federal Reserve employee, Rosemary has been a great friend of the Museum since our founding, and we honored her with a commemorative plaque on opening night. "The Fed at 100" is also our first truly global exhibit, as our friends and sister museum in China will showcase this exhibit at the Chinese Museum of Finance beginning in December.

At our annual gala on January 14, we will honor Duncan Niederauer, CEO of NYSE Euronext, with the Whitehead Award for Distinguished Public Service and Financial Leadership. The Exchange has been an early and steadfast supporter of the Museum, and we look forward to a night when we can recognize our appreciation with our highest award. As a 501(c)3 non-profit organization, we rely on the sponsorship of individuals and institutions, and the gala is a great way to show your support for the Museum and its mission while enjoying a memorable evening. Please contact Jeanne Driscoll at jdriscoll@moaf.org or 212-908-4694 to receive an invitation, or complete the gala reservation form on page 15. I look forward to seeing many of you that evening! $

Photo: MaryRose Devine

David Cowen and Rosemary Lazenby, curator of the Federal Reserve Bank of New York, at the opening of "The Fed at 100."

NOV 1 1999

The Dow Jones Industrial Average replaces four old companies — Chevron, Goodyear, Sears and Union Carbide — with four hot growth stocks — Home Depot, Intel, Microsoft and SBC Communications.

NOV 5 1626

Pieter Schagen, an official of the Dutch West India Company, reports that settlers have purchased the island of Manhattan for 60 guilders.

Museum Launches "The Fed at 100" Exhibition

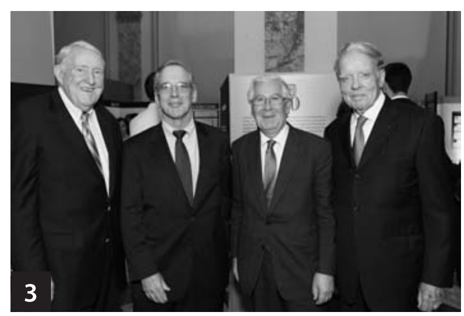
On September 25, the Museum opened "The Fed at 100," an exhibition commemorating the centennial anniversary of the Federal Reserve System. The exhibition illuminates the complex workings of the nation's central bank and the pivotal role it has played throughout the history of American finance. Federal Reserve Bank of New York President William C. Dudley formally introduced the exhibit at an opening reception that evening.

"The Fed at 100" is the Museum's largest exhibition to date and encompasses three galleries and a theater. The exhibition includes a unique visitor experience designed to provide a firsthand view of the Fed's inner workings and position within the federal government. Visitors are invited to enter and explore the offices of four people who play critical roles in designing policy and overseeing the central bank: the Chairman of the Board of Governors; a Reserve Bank president; a research assistant; and the Chairman of the Senate Banking, Housing, and Urban Affairs Committee.

"A central monetary authority has been a vital aspect of America's financial history," said David Cowen, the Museum's president and CEO. "We are excited to be marking the first 100 years of the Federal Reserve with an exhibition that aims to demystify this institution for the public."

The exhibition includes an audio tour of 100 objects representing different facets of the Fed. The tour features excerpts from oral histories with Federal Reserve employees — from security guards to executive assistants to senior-level staff — and highlights the people behind the institution, as well as key moments in the Fed's history. A gallery is also dedicated to the Federal Reserve Bank of New York, which plays a special role in the Fed System, including implementation of monetary policy and supervision of some of the largest banks in America.

Renowned economic historians Dr. Richard Sylla and Dr. Eugene White served as content advisors for this exhibition. Major support was provided by The Adirondack Trust Company, the Chinese Museum of Finance, the Friedman Family Foundation, Macy's, the National Endowment for the Humanities and Tishman Speyer Properties, LP. "The Fed at 100" will be on view through October 1, 2014. $



Photos: MaryRose Devine

1. Office representing the Chairman of the Senate Banking, Housing, and Urban Affairs Committee in "The Fed at 100" exhibit. **2.** William Dudley, president of the Federal Reserve Bank of New York, speaks at the exhibition opening. **3.** Opening reception attendees included (L to R): Gerald Corrigan, William Dudley, Mervyn King and William McDonough. **4.** Dr. Eugene White, co-curator of "The Fed at 100," delivers remarks at the opening reception. **5.** Map of the 12 districts of the Federal Reserve System.

NOV 14 1972

The Dow Jones Industrial Average closes above 1000 for the first time after coming close to that level in 1966, 1968 and 1969. It finishes the day at 1003.16.

NOV 14 1867

The first stock ticker goes "online," making continuous nationwide transmission of stock prices possible for the first time.

Remembering Two Trailblazing Women on Wall Street

This year, the world lost two Wall Street pioneers with the passing of Isabel Benham and Muriel "Mickie" Siebert. Both women paved the way for women in the financial services industry and, as such, were featured in the Museum's 2010 exhibition, "Women of Wall Street."

"Madam Railroad"

When Isabel Benham attended Bryn Mawr, a women's college, in the late 1920s, economics courses were not offered at all. In fact, upon hearing of Benham's desire to study economics and work on Wall Street, a dean of the college advised her to enroll in typing school. Benham, however, insisted that the school offer economics, and she became one of only five women in her class to graduate with a degree in that field in 1931.

With the Great Depression and her gender working against her, Benham persisted in her efforts to work on Wall Street, initially supporting herself by selling magazine subscriptions. She eventually landed a job with RW Pressprich as a bond statistician. Working for years for a boss whom she said "made life difficult," Benham went on to become one of the most distinguished railroad analysts on Wall Street and the first woman to be named partner at a Wall Street bond house.

"The First Lady of Finance"

In 1967, Muriel "Mickie" Siebert became the first woman to purchase a seat on the New York Stock Exchange. The lone woman among 1,365 men, Siebert had struggled to purchase the seat, having been turned down by nine prospective sponsors before finding the required two sponsors to endorse her application.

In 1975, Siebert & Co. became the nation's first discount brokerage. In 1977, Siebert became the first female Superintendant of Banks for New York State, overseeing all of the New York banks, which had assets of approximately $500 billion. Not a single bank failed during her tenure.

Siebert remained president of Siebert & Co. until she passed away on August 24. She was heavily involved in philanthropic work, particularly projects that advocate on behalf of women and minorities in the financial industry, as well as those that teach financial literacy. $

NOV 19 1792 In the same room where the Declaration of Independence was adopted 16 years earlier, the Insurance Company of North America holds its IPO at $10 per share. More than 660 investors sign up for shares.

NOV 30 1999 Exxon and Mobil merge to form ExxonMobil Corp.

Volunteer Spotlight: Susan Narow

With education at the heart of the Museum's mission, it is no surprise that a number of its volunteers are retired teachers. One such volunteer is Susan Narow, who has been working one day a week in the Visitor Services department since the Museum opened at 48 Wall Street in early 2008.

Susan was an elementary school teacher in the New York City public school system for more than 25 years before she retired. Upon retirement, she filled her schedule with a wide variety of volunteer positions with organizations ranging from the Staten Island Mental Health Society, where she served as a reading volunteer, to the Leukemia & Lymphoma Society in Manhattan, where she did data processing. In addition to her work at the Museum of American Finance, she currently volunteers as a school group docent at the Mount Vernon Hotel Museum and Gardens.

Susan was initially drawn to the Museum of American Finance because of its focus on financial education, which she believes is an important mission. As a volunteer greeting visitors at the Museum's front desk, she enjoys meeting people from around the world and likes that it is a very different setting from the school environment in which she spent her career. Susan said she particularly enjoys working with the Museum's staff, as well as its high school and college interns, as she finds it interesting to gain a younger generation's perspective on current events.

When she is not volunteering, Susan loves spending time with her two-and-a-half-year-old twin grandchildren and often goes to the park with them. She belongs to the Lincoln Center Theater, enjoys swimming and likes reading spy novels and historical fiction set in 17th and 18th century England. $

MoAF Welcomes New Members of the Futures Society

We are delighted to announce the newest members of the Museum's Futures Society. Two individuals who have been involved with the Museum for many years have recently joined our planned giving group. Professor Richard Sylla, the Museum's chairman, and Dr. William Schmidt, a long-standing member from South Carolina, have both notified us that they are naming the Museum as a beneficiary in their wills.

Richard Sylla's connections with the Museum date to 1990, when he moved to New York City to take up an appointment as the first Henry Kaufman Professor of the History of Financial Institutions and Markets at NYU's Stern School of Business. He served on the editorial board of the Museum's magazine, and then on its board of trustees, eventually becoming vice chairman and, in 2010, chairman.

"My long career as a scholar has been devoted to researching and teaching about the key role of financial development in modern history," said Sylla. "The nations that first modernized their financial systems in their parts of the world — the Italians, the Dutch Republic, Great Britain, the United States and Japan — parlayed financial sophistication into economic and political leadership. The Museum's programs bring those lessons, and many others, to a wider audience. By enrolling in the Museum's Futures Society, I can do a bit to perpetuate the teaching of lessons I have learned and taught in my life's work."

William Schmidt first became a member of the Museum in 1990, shortly after it was founded. He initially learned of the Museum when he met Museum founder John Herzog and his wife, Diana, at a scripophily event. A New Jersey native living in South Carolina for the past 40 years, Schmidt has not had the opportunity to visit the Museum, but strongly believes in its efforts to help people become better financially informed.

"I have included the Museum of American Finance in my will because I want the Museum to be around for future generations to learn more about our nation's financial history. I am pleased to support an institution devoted to providing a greater understanding of how markets, investment, money and banking work."

All are welcome to support the Museum by joining the Futures Society; it is very easy to enroll. Most members of the Society have made arrangements to include the Museum in their wills. Alternatively, one can designate the Museum as a beneficiary in a retirement plan, name the Museum as owner and beneficiary of a life insurance policy or make tax-advantaged gifts of securities or art. $

Please work closely with your estate planning attorney to finalize your plans. For additional information, please contact Jeanne Baker Driscoll at 212-908-4694 or jdriscoll@moaf.org.

DEC 1 1949 The Chicago Stock Exchange, the Minneapolis-St. Paul Stock Exchange, the Cleveland Stock Exchange and the St. Louis Stock Exchange merge to form the Midwest Stock Exchange.

DEC 3 1777 The US national debt is born, as the Continental Congress authorizes Benjamin Franklin and Silas Deane, the American commissioners to France, to obtain a loan of £2 million from the French government.

Hukuang Railway Bonds of 1911

By Manman Huang

As an intern working with the Museum's collections, a document from the Hukuang Railways Sinking Fund Gold Loan of 1911, or the "Hukuang Bond," has become one of my favorites. The rich history behind this document impacted both China and the United States.

The last imperial Chinese government in the Qing (Manchu) Dynasty issued the Hukuang Bond. Just prior to the dynasty's collapse, it issued millions of dollars' worth of railway bonds, including the $6 million Hukuang Loan in 1911. The certificate is larger than most other bond documents, measuring 20x16 inches, and its terms are framed by a complex pattern to prevent counterfeiting. The bond was designed by Waterlow & Sons, a major London printer of securities and financial documents, and it features a locomotive vignette.

The Hukuang Railways consisted of two routes, the Canton-Hankou Railway and the Sichuan-Hankou Railway, which covered a total distance of approximately 2,545 miles. It was one of the country's most complicated railways and united central China with its coasts.

The Hukuang Bond was ordered by the Minister of Post and Communications, Sheng Hsuanhuai, on May 9, 1911, and was part of the nationalization of all locally-controlled railway projects. On May 20, the Minister signed the loan agreement with the four-nation Banking Consortium and pledged the rights to operate the railroads. Initially in 1909, the credit was to be underwritten by a consortium of French, German and British banks, and by 1911 the United States had joined the consortium too. The four countries were to share equally in the £6 million bond issue of the Hukuang Railways. US participation in the bond issue was part of President William Howard Taft's policy of "dollar diplomacy," which began at the start of the 20th century.

On the Hukuang Bond, below the Chinese Minister's signature, are the underwriting American banks: J.P. Morgan and Co., Kuhn, Loeb and Co., the First National Bank of the City of New York and the National City Bank of New York. This bond certificate marks the earliest business activities of these banks in China and predates the opening of their first regional offices there.

Foreign participation in this issue caused an extremely vocal reaction by the Chinese in 1911, and a group called the Railway Rights Protection Movement was organized to protest the imperial government's negotiations with foreign banks. The most severe disturbance was in Chengdu, Sichuan. As a historian describes, "the outraged Szechuanese groups protested that the government intended to sell Szechuan to the foreigners. The local ruling class [of merchants, gentry and landowners] mobilized students, workers and peasants into their 'patriotic' protest." All levels of society had banded together against the government, and the movement was well-organized.

When the Qing government transferred the army from Hubei to Sichuan province in order to suppress the protests, the military forces in Hubei were weakened. This enabled a new army of revolutionaries to stage a coup, first arising in Wuchuang, Hubei, against the central officials. This event, called the Wuchuang Uprising, ended the Qing Dynasty. Ten years later, the British Minister of Peking, J.N. Jordan, declared the Hukuang Railway loan agreement "was the proximate cause of the downfall of the Dynasty."

At the time of the uprising, the imperial government often frustrated the Chinese populace. Prior to 1911, the late Qing Dynasty had a number of patriotic reform efforts; some resulted in violence and disaster, including the Boxer Rebellion (1899-1901). The Hukuang Bond was only the latest fuse igniting the fundamental push towards revolution and the overthrow of the Qing government.

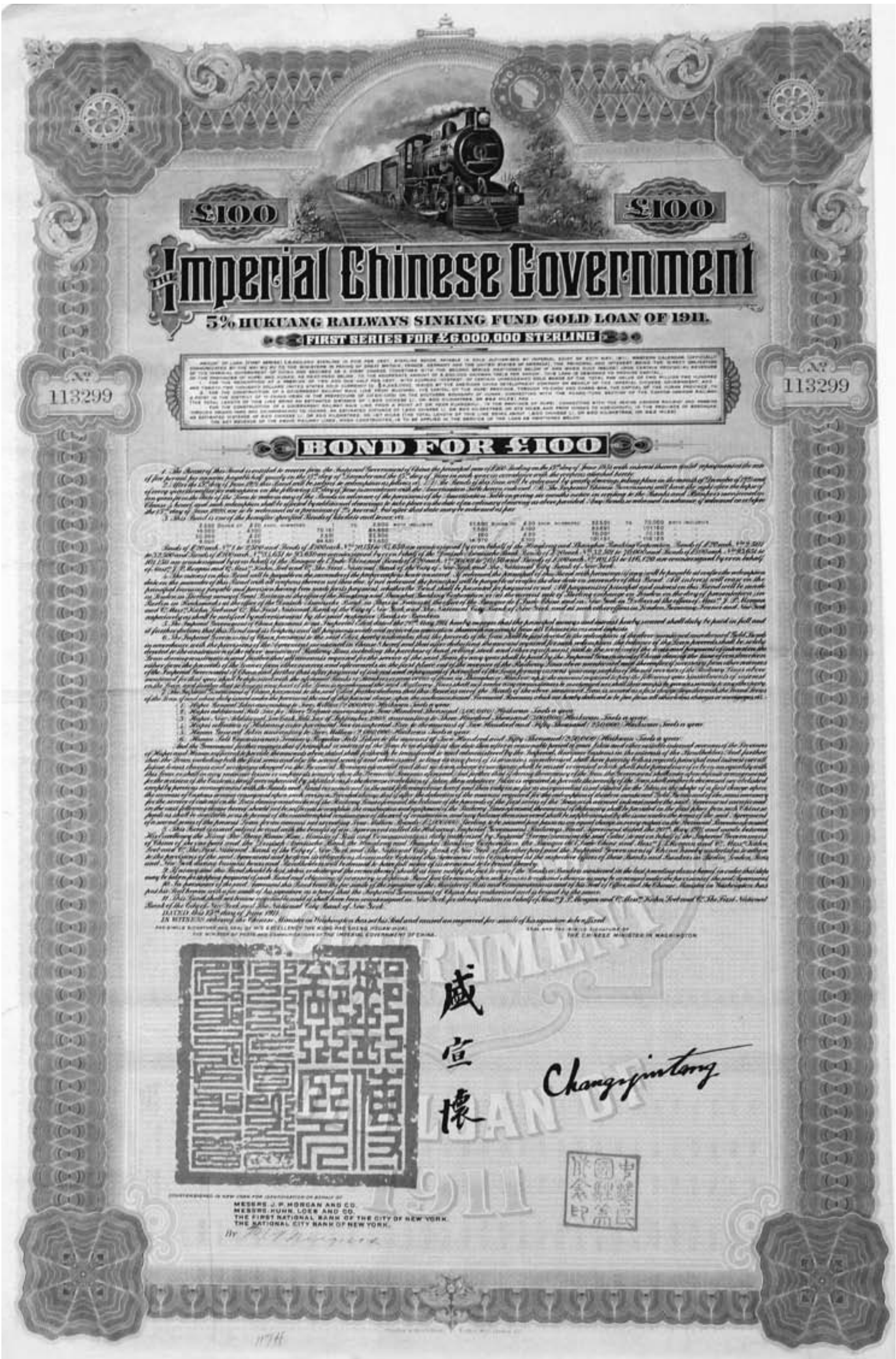
As a result of the revolution, the government of the Republic of China (1912–1928) and Chiang Kai-shek's Nationalist Republic of China (POC) government (1927–1948) came to power, but struggled to fund the railroad expansion. They, too, issued bonds to the foreign banks in 1913 in order to finish the Hukuang Railways and finance the international debt. The POC eventually declared bankruptcy in 1921 and was forced to renegotiate the debt, but it defaulted anyway in the mid-1930s. The modern communist government of the People's Republic of China (PRC) came to power in the 1940s, and they denied the "odious debt."

In the 1980s, 243 owners and assignees of the Hukuang Railroad bonds filed suit against the PRC in *Jackson v. People's Republic of China*. The PRC never appeared in court, and a default judgment was awarded to the bondholders in the amount of $41.3 million. The lawyers for the plaintiffs threatened to "collect on the default judgment by attaching Chinese bank accounts and assets" in the United States. Eugene Theroux, lawyer for the Chinese government, repudiated the debt, stating that it was "an odious debt forced on the Chinese by foreign bankers, on terms that were unfair."

Filed in the early 1980s, this case was complicated not just by the financial and legal issues in dispute, but by the emerging political relationship between the US and China. Following a period of political stalemate between the two countries after the Vietnam War, relations had begun to normalize in

DEC 15 1835 A fire rages through Lower Manhattan, destroying the New York Stock & Exchange building. A strongbox containing important NYS&E documents is rescued from the flames by a broker, whose grateful peers give him a generous cash reward.

DEC 16 1985 The US House of Representatives approves the Tax Reform Act of 1986.



Collection of the Museum of American Finance

the decade after the Nixon visit of 1972; but in 1983, the relationship between the two countries was still very delicate.

The PRC responded by submitting a letter to George Shultz, the US Secretary of State, during his February 1983 visit to Beijing. The letter charged that the State Department had "shirked its responsibility" and stated that the PRC expected the administration to "handle the case properly so that Sino-US relations and normal trade and economic exchanges may not be impaired." Moreover, Deng Xiaoping personally raised the issue with Shultz. Shultz asked US District Judge U.W. Clemon to reconsider the default judgment, as he pointed out that "permitting the People's Republic of China to have its day in court will significantly further the United States' foreign policy interest."

Judge Clemon finally set aside the judgment against PRC, stating, "A failure to set aside the default judgment may adversely impact on important and delicate United States-Sino relations. The public interest therefore requires that the court's discretion be exercised in favor of setting aside the default and adjudicating the untimely-filed defenses of China." In the end, China won the suit.

This one bond, in a way, triggered the modern Chinese revolution that resulted in the shift from the Qing Dynasty to the Republic of China, and finally to the People's Republic of China. It came as a result of President Taft's "dollar diplomacy" and was an important part of J.P. Morgan's earliest international business ventures; it survived the frozen relationship between the United States and China, and the warming in the 1970s; it was affected by the Foreign Sovereign Immunities Act and issues of international comity. Each event is chained together by this bond certificate, making it an invaluable piece of history. $

Manman Huang is a Graduate Exhibits and Archives intern at the Museum.

DEC 27 1928
Portfolio manager Walter Morgan founds the nation's first "balanced" mutual fund, the Industrial and Power Securities Co., which invests in both stocks and bonds. Later renamed the Wellington Fund, it eventually forms the nucleus of the Vanguard Group of Investment Cos.

DEC 28 1967
After 175 years, the New York Stock Exchange finally admits its first woman member, Muriel Siebert of Muriel Siebert & Co.

President Lincoln of the Pullman Company

By Brian Grinder and Dan Cooper

Abraham Lincoln II was dead. Jack, a nickname given to him by his father, had suffered a cut to his left arm in November of 1889. He had been studying French at Madame Passa's school in Versailles, France, and disciplinary measures taken by his instructor may have been the cause of his wound. Infection soon set in, and a telegram was sent to his parents informing them that Jack was very ill.

Robert Todd Lincoln, Jack's father, had just begun serving as US minister to Great Britain. He and his wife, Mary, rushed to Jack's side and hired the best physicians available to care for Jack. A large abscess had begun to grow below his left armpit, and he developed blood poisoning after the abscess was drained. Jack's condition fluctuated over the next several weeks, but it had improved enough by early December that his father decided to return to London. One week later, Jack's condition worsened, and his father was called back to Versailles. In January, after losing confidence in the French physicians, the Lincolns decided to move Jack to London where he could be cared for by Dr. H. Webster Jones, a well-regarded surgeon from Chicago. Unfortunately, Jack's health failed to improve, and he died in the Lincoln's London home on March 5, 1890.

Death was no stranger to the oldest son of Abraham Lincoln. His younger brother, Eddie, died of tuberculosis when he was four years old. Brother Willie died of typhoid fever while his father was President of the United States, and Tad Lincoln died of pleurisy at the age of 18. Robert was in Washington, DC visiting his parents when his father was assassinated; he was present in the Baltimore and Potomac train station in Washington, DC when President Garfield was fatally shot; and he was also very close at hand in Buffalo, NY when President McKinley was assassinated.

Jack's death, however, had a far deeper impact on Robert than even his own father's assassination.

To be sure, the assassination of President Lincoln changed Robert's life dramatically. Instead of studying law at Harvard as he had planned, Robert, who was now responsible for his mother and his only surviving brother Tad, was forced to read law at a prominent Chicago law office in order to expedite his entrance into the legal profession. In a few years,

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Portrait of Robert Todd Lincoln, son of Abraham Lincoln and president of the Pullman Company.

Collection of the Museum of American Finance

Certificate for 5,000 shares in the Pullman Company made out to Hattie Sanger Pullman, January 12, 1900.

the law firm of Isham & Lincoln was regarded as one of Chicago's finest, and Robert was making a decent living as a lawyer. Robert hoped his only son would one day join the firm and eventually take it over, but now that Jack was dead, he began to lose interest in the law. He confided to Henry White, the chargé d'affairs of the US in London, that "all his interest in the law was for Jack's sake, and to keep the place open for him."

In spite of the devastating loss of their only son, the Lincolns chose to stay in London instead of returning home to the United States. Robert continued as the US minister to Great Britain and turned in his resignation only after Democrat Grover Cleveland defeated the incumbent Republican President Benjamin Harrison in the election of 1892.

After his resignation, Robert did not return to his law firm, but took an extended vacation. By early 1894, with his bank account rapidly dwindling, he knew that it was time to go back to work. He was hired that spring to be George M. Pullman's personal legal advisor.

The relationship between the Pullman Palace Car Company and the Lincolns was a long one. According to company lore, the initial success of the firm came about because Robert's mother, Mary Lincoln, rode in the first Pullman car prototype from Chicago to Springfield as a part of her husband's funeral train. Many years later, a Pullman employee who claimed to have heard the story from Pullman himself, reported that, "Mr. Pullman's car became the subject of universal comment. From that moment on its success was assured."

Although many Lincoln scholars doubt that a Pullman car was part of the Lincoln funeral train, it is clear that Robert developed a long-lasting relationship with

George Pullman that began back in the 1870s. Moreover, the law firm of Isham & Lincoln performed legal services for the Pullman Company for many years.

Things quickly heated up in Lincoln's new job when Pullman employees went on strike in the spring of 1894. An economic downturn forced Pullman to reduce the wages of his employees, but he refused to reduce rents in the company town of Pullman, IL.

Pullman refused to negotiate with unions or engage in any kind of arbitration during the Pullman strike. He simply closed down the Chicago plant and waited out the strikers. When the strike finally collapsed in early August, Pullman reopened the plant without making any concessions to his employees.

A federal commission later issued a report on the strike that condemned Pullman for refusing arbitration. Pullman testified before the commission, and Lincoln was given the task of editing Pullman's testimony for publication. The strike, which cemented Pullman's reputation as a heartless capitalist, also tarnished Lincoln's reputation by virtue of his association with Pullman.

After the strike, Lincoln continued to avoid work as an attorney but became more involved in corporate America by accepting positions on the boards of several major corporations. He also personally invested in many companies and helped with the initial public offering of the Glucose Sugar Refining Company of Illinois.

In 1895, Lincoln finally took the plunge and became president of the Chicago Gas, Light, and Coke Company, and in 1897 he assumed the presidency of the Chicago Telephone Company.

When George Pullman died in October of 1897, Lincoln and attorney Norman Ream were named executors of his estate. It took them two years to settle the estate, for which they were paid the handsome sum of $425,000. In the middle of November 1897, the board of directors of the Pullman Company met and chose Lincoln as interim president. (Pullman's two sons were evidently interested in his wealth, but not his business.)

According to Lincoln biographer Jason Emerson, "It soon became apparent to everyone that Robert Lincoln was an extraordinary businessman and, whether he knew it at the time or not, had found his destiny."

Lincoln became the permanent head of the company in 1901, and it flourished under his leadership. He led the company for 12 years and quietly continued to enforce most of the policies put in place by the company's founder. Robert Lincoln took great pains to avoid the spotlight of publicity that inevitably fell on the son of a martyred and revered leader.

Throughout his life, he resisted calls to run for President. He usually shunned politics, but when duty called he felt compelled to serve. Such service included accepting the position of Secretary of War under the Garfield » *continued on page 39*

BREAKING THE GLASS

© Bettmann/CORBIS

By Gregory DL Morris

In the past year, two people intimately associated with getting the "Glass-Steagall Act" abolished have recanted. Last April, Richard Parsons, who had retired as chairman of Citigroup, said the financial crisis was partly caused by a regulatory change that permitted his company's creation. The 1999 repeal of the Glass-Steagall law that separated banks from investment banks and insurers made the business more complicated.

"To some extent what we saw in the 2007, 2008 crash was the result of the throwing off of Glass-Steagall," Parsons said.

This was a rather astonishing about face, reflecting a return, however hesitant, to a consensus that prevailed in the early 1930s. Back then, the Great Depression led two legislators — Senator Carter Glass (D-VA), a former Secretary of the Treasury, and Congressman Henry B. Steagall (D-AL), Chairman of the House Committee on Banking and Currency — to collaborate on the landmark legislation that bears their name. Technically there are two discrete laws that have become known the "Glass–Steagall Act." The first, passed in 1932, is lesser known, and with good reason, as it is a rather technical restriction on Federal Reserve banks regarding other institutions to which they can lend. The following year, the two men led passage of the far-more sweeping Banking Act of 1933, or what is simply known as "Glass-Steagall."

It had many provisions, but the most essential involved the separation of investment banking from retail or commercial banking. Carter Glass had been trying since 1930 to prohibit, or at least limit, investment and retail banking under the same roof. By 1933, that reform was widely, but not universally, believed to be necessary. The Congressional negotiations were more about how extensive the separation should be, and how long financial institutions would be allowed to unwind and reconfigure. The question was not really whether it should be done, but how.

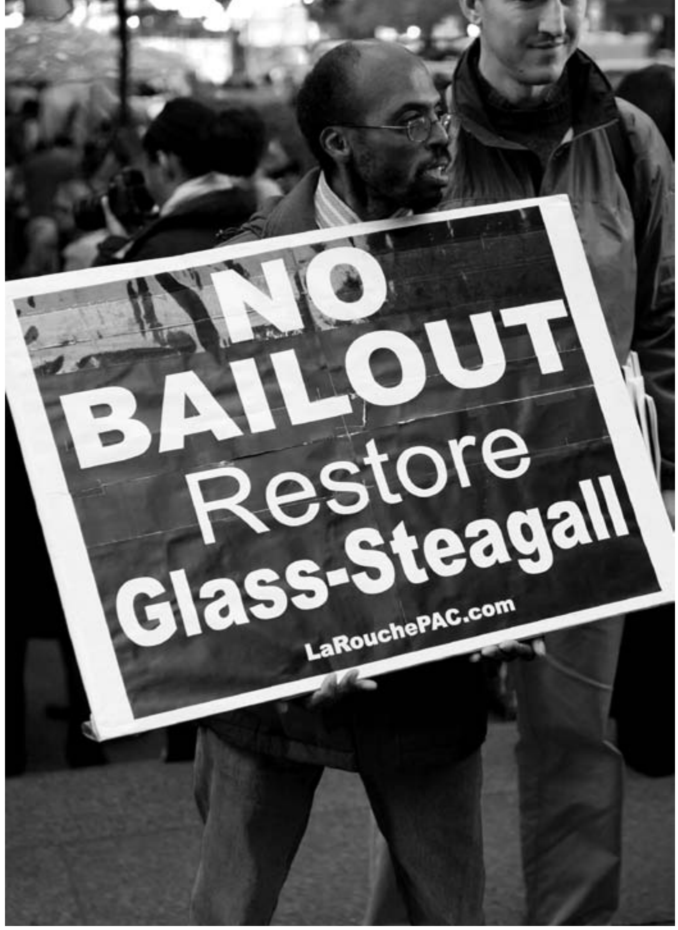
The heated debate at the time was much more concerned with an element of banking reform that is taken as obvious today: deposit insurance. It was highly

President Franklin D. Roosevelt signs the Glass-Steagall Act, June 16, 1933.

controversial at the time, derided as socialism and immoral. President Franklin D. Roosevelt supported separation of commercial and investment banking, but threatened to veto an early version of Glass-Steagall because it included deposit insurance.

FDR’s thinking on this issue changed over time, and not in a strictly linear fashion. In the first of his now-famous “fireside chats,” Roosevelt addressed the banking crisis in detail, but made no mention of deposit insurance. Politically adept, he was aware it was a controversial proposal. Rather than picking up the pieces after a bank had failed, it was more important for government to make structural changes.

“Some of our bankers had shown themselves either incompetent or dishonest in their handling of the people’s funds,” he said during that March 12, 1933 radio address, adding that it was “the government’s job to straighten out this situation and do it as quickly as possible — and the job is being performed.”



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Protesters call for the Glass-Stegall Act to be restored, October 17, 2011.

Roosevelt presented a sunny outlook in that address, outlining the plan to reopen sound banks immediately and recapitalized or restructured ones as soon as possible. But as the weeks and months dragged on, faith in the banking system was not so easily restored. Further measures would be necessary. On June 16, 1933, with Senators Glass and Steagall in attendance, FDR signed the act creating the Federal Deposit Insurance Corporation (FDIC).

The Banking Act of 1935 strengthened and clarified many of the provisions of the 1933 Act. Also in 1935, Senator Glass tried to repeal the provision of his own 1933 legislation banning retail banks from underwriting securities. Roosevelt headed him off, expressing deep concerns that underwriting could not be allowed in any form. Further banking regulations implemented during the ’40s and ’50s shackled the banks still further, but it didn’t matter: between the war economy and the post-war boom, banks were making plenty of money.

No sooner did the go-go economy cool in the ’60s, but banks began lobbying to creep back into investments. An early foray was selling bonds. To be sure, brokerages started offering money-market accounts, check writing and credit cards, so banks were facing encroachment of their own.

In 1986, the Fed reinterpreted the section of Glass-Steagall that prohibits retail banks from being involved in securities. The key phrase was “engaged principally,” and the Fed ruled banks could honor that rule if they had 5% or less gross revenue from investment banking. The camel’s nose was under the tent.

The following year Citicorp, along with JPMorgan and Bankers Trust, lobbied hard to be able to engage in underwriting. Thomas Theobald, vice chairman of Citicorp at the time, argued that there were three external controls that would restrain irresponsible actions by banks if they were allowed back into underwriting. Theobald was in earnest, but in retrospect these safeguards were laughable: effective regulation as led by the Securities & Exchange Commission, knowledgeable and sophisticated investors and rigorous and independent ratings agencies.

The Fed vote was 3-2 in favor of allowing retail banks into underwriting, with Chairman Paul Volcker voting a firm no. In August 1987, Alan Greenspan became Fed chairman. Greenspan had been on the board of J.P. Morgan and was known to advocate banking deregulation.

Full repeal of Glass-Steagall did not come until the 1999 Gramm-Leach-Bliley Act, and the road still had some twists. Congress failed to pass several preceding repeals, notably in 1988; a previous attempt in 1984 predated Greenspan. In 1990 the Fed under Greenspan allowed J.P. Morgan to underwrite securities, as long as its underwriting business was less than 10% of gross revenue. In 1996 the Fed raised the limit on investment banking to 25%, and the following year lifted any limit, saying only that investment banking operations and risks had to be “manageable.”

By the end of that year Bankers Trust became the first US depository bank to own an investment bank since the New Deal when it acquired Alex Brown & Co.

But perhaps things are changing. Richard Parsons is not the only high-level apostate. Last summer, former Citigroup Chairman & CEO Sanford I. Weill, the champion of the overthrow of Glass-Steagall, called for megabanks like the one he created to be disassembled. In an interview on the CNBC program Squawk Box Weill stated, “What we should probably do is go and split up investment banking from banking, have banks be deposit takers, have banks make commercial loans and real estate loans, have banks do something that’s not going to risk the taxpayer dollars, that’s not too big to fail.” **$**

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Photos: Elsa Ruiz

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2014 Gala

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DUNCAN L. NIEDERAUER

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A table for ten for dinner in a VIP location
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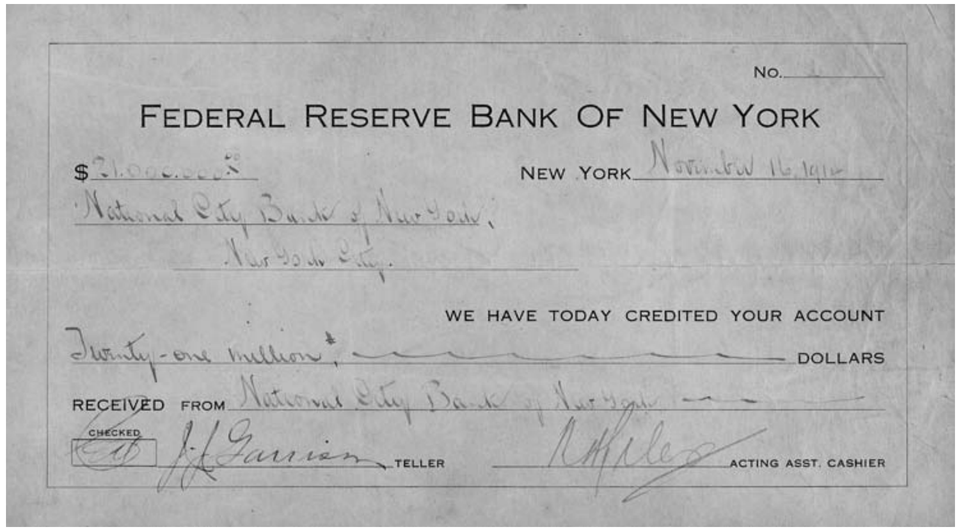
THE FED AT 100

A RETROSPECTIVE

By Eugene N. White


NO.

FEDERAL RESERVE BANK OF NEW YORK

$21,000,000

NEW YORK November 16, 1914

National City Bank of New York,

New York City.

WE HAVE TODAY CREDITED YOUR ACCOUNT

Twenty-one million DOLLARS

RECEIVED FROM National City Bank of New York

CHECKED

TELLER

ACTING ASST. CASHIER

Citi Center for Culture, Heritage Collection

Receipt for the first reserve deposit to the Federal Reserve Bank of New York by the National City Bank of New York (today, Citibank), for $21 million.

This year marks the centennial of the Federal Reserve Act, signed into law by President Woodrow Wilson on December 23, 1913. While the actions of today's Federal Reserve System — "the Fed" — are the subject of intense scrutiny and public debate, few are familiar with the Fed's origins, design and structure and how they influence its decision making.

Today there is no shortage of critics who fault the Fed for setting conditions that contributed to the housing boom and panic of 2008, or for failing to correctly manage the aftermath. What is unknown to most pundits is that the Fed was, in fact, created in response to the Panic of 1907, a crisis that has many parallels with 2008.

In the waning years of the 19th century and the beginning of the 20th, new financial institutions slipped around the federal regulations imposed by the National Bank Act of 1864. The intention of this Civil War legislation was to form a safe and sound banking system, and for the first few decades it appeared to succeed. But, by setting high reserve and capital requirements, limiting bank activities and prohibiting branch banking, federal law left many parts of the country under-banking. State legislatures were happy to fill this gap, chartering thousands of state banks in towns that were too small for larger, more closely-regulated federally-chartered national banks. While serving the needs of their local communities, their small size and undiversified portfolios left state banks at a higher risk in any downturn.

Given this banking structure, an economic setback could easily lead to bank failures. Wary of losing their deposits, the public would rush to the counters of endangered banks. One bank run might morph into a banking panic when it proved impossible to immediately distinguish between solvent and insolvent banks. Panics were endemic to the United States in the late 19th century, engulfing the country in 1873, 1884, 1893 and 1907. The Panic of 1907 was particularly intense because more new financial intermediaries — trust companies — had become tough competitors for national banks in the cities.

Federal Reserve Bank of New York, Curating Section

Participants in the first joint meeting of Federal Reserve bank officers and directors, October 1914.

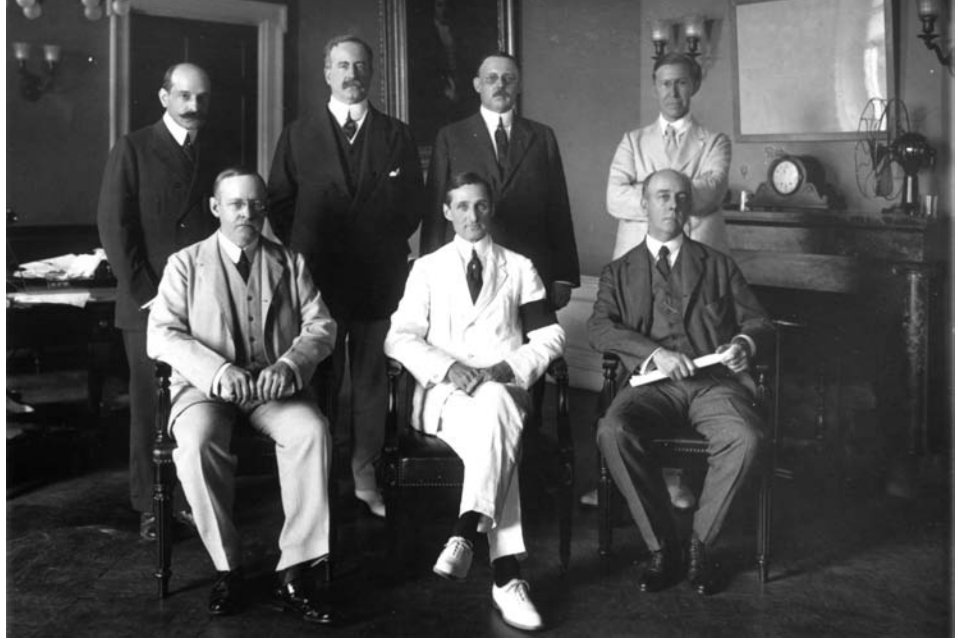
These institutions were also state chartered and less strictly regulated. They took more risk but had less access to the clearing houses, the only institutions capable of providing assistance in a panic. The clearing houses were clubs of established banks that in regular times helped to settle payments between banks. In panics, they provided each other with liquidity but were wary of helping out their less-regulated competitors. In 1907, the panic erupted when the second largest trust company, Knickerbocker Trust Company, was refused assistance by the New York Clearing House.

Although the United States had attempted to establish central banks before the Fed, with the First Bank of the United States (1791–1811) and the Second Bank of the United States (1816–1836), competitors and anti-bank populist sentiment ensured that these institutions' charters were not renewed after an initial 20 years. The result was that by the turn of the 20th century, the US, unlike the major European economies, did not have a central bank.

Britain had chartered the Bank of England in 1694, France had established the Banque de France in 1800 and Germany had created the Reichsbank in 1876. In contrast to these countries, there was no public institution in the US that could deliver sufficient coin and currency to banks so they could continue payments to a panicked public. Coupled with the US banking system's structural fragility, the absence of a central bank meant that panics were a serious macroeconomic threat that made recessions more costly.

Under the guidance of Senator Nelson Aldrich, the leading Republican in the Senate, Congress responded to the events of 1907 by passing a stop-gap measure, the Aldrich-Vreeland Act of 1908, to provide temporary liquidity. In addition, it set up the National Monetary Commission to study financial systems around the globe, with an eye to determining what would make for a successful American central bank. The result was Aldrich's proposal for a National Reserve Association that had many of the features that would later be embodied in the Federal Reserve Act. Unfortunately for the Senator, the Republicans lost control of the House of Representatives in the elections of 1910 and then both houses and the presidency in 1912. While the Act of 1913 is sometimes termed the Glass-Owen bill because Representative Carter Glass and Senator Robert Owen headed the Congressional banking committees, it drew heavily on Aldrich's plan for a National Reserve Association with 15 regional branches.

Although there were features of the Fed that were influenced by the study of foreign central banks, the Fed is a distinctively American central bank. As such, it reflects the American political system, with its federal character and its checks and balances for varied economic and regional interests. Unlike any contemporary central bank in 1913, the Fed was intended to be a decentralized central bank with 12 regional Federal Reserve banks that would serve the national and state member banks of the region, providing them with emergency funds in times



Federal Reserve Bank of New York, Curating Section

The First Board of Governors of the Federal Reserve System: Paul M. Warburg; John Skelton Williams, Comptroller of the Currency; William P. G. Harding; Adolph C. Miller; Charles S. Hamlin; William G. McAdoo, Secretary of the Treasury; and Frederic A. Delano.

of crisis. The composition of the Federal Reserve banks' boards of directors was intended to carefully represent and balance the interests of agriculture, industry and commerce and give both small and large banks a say in their operations. However, the nation's economy and the Fed have evolved, and that trio of interests was modernized in 1977 to include another trio comprised of services, labor and consumers.

Aldrich had conceived of an association of regional reserve banks, but it was President Woodrow Wilson who insisted that there be a Federal Reserve Board based in Washington, its members being appointed by the President upon the advice and consent of the Senate to ensure that the strongest influence was not the banker interest. The long, staggered terms of the members of the Board help to keep the Fed partly removed from electoral cycles. Consequently, the Fed is often portrayed as an independent agency of government, above and isolated from the ordinary fray of politics, "a Supreme Court of Finance."

However, given the cooperative nature of monetary and fiscal policy, it is not completely insulated from pressures by the US Treasury and Congress. It is, in fact, more aptly described in a famous quote attributed to William McChesney Martin, the Chairman of the Board of Governors (1951–1970). In speaking of the Fed's vaunted independence, Martin emphasized that it "does not mean independence from the government but independence within the government."

There were high hopes for the new Federal Reserve banks when they opened their doors in 1914 and the Board convened its first meetings. Some observers breathed a sigh of relief that the US had an institution that could help prevent the scourge of panics and improve the stability of the banking system. This optimism was perhaps best expressed by Will Rogers, the eminent American humorist and social commentator of the early 20th century. He took the longest of historical perspectives when he pronounced that: "There have been three great inventions since the beginning of time: fire, the wheel and central banking." But even at the Fed's birth, there were vehement critics. At this end of the spectrum was Congressman Charles A. Lindbergh Sr., father of the aviator, who commented frequently on the new institution. After the passage of the Federal Reserve Act, he uttered one of his most benign assessments and predicted that: "From now on depressions will be scientifically created."

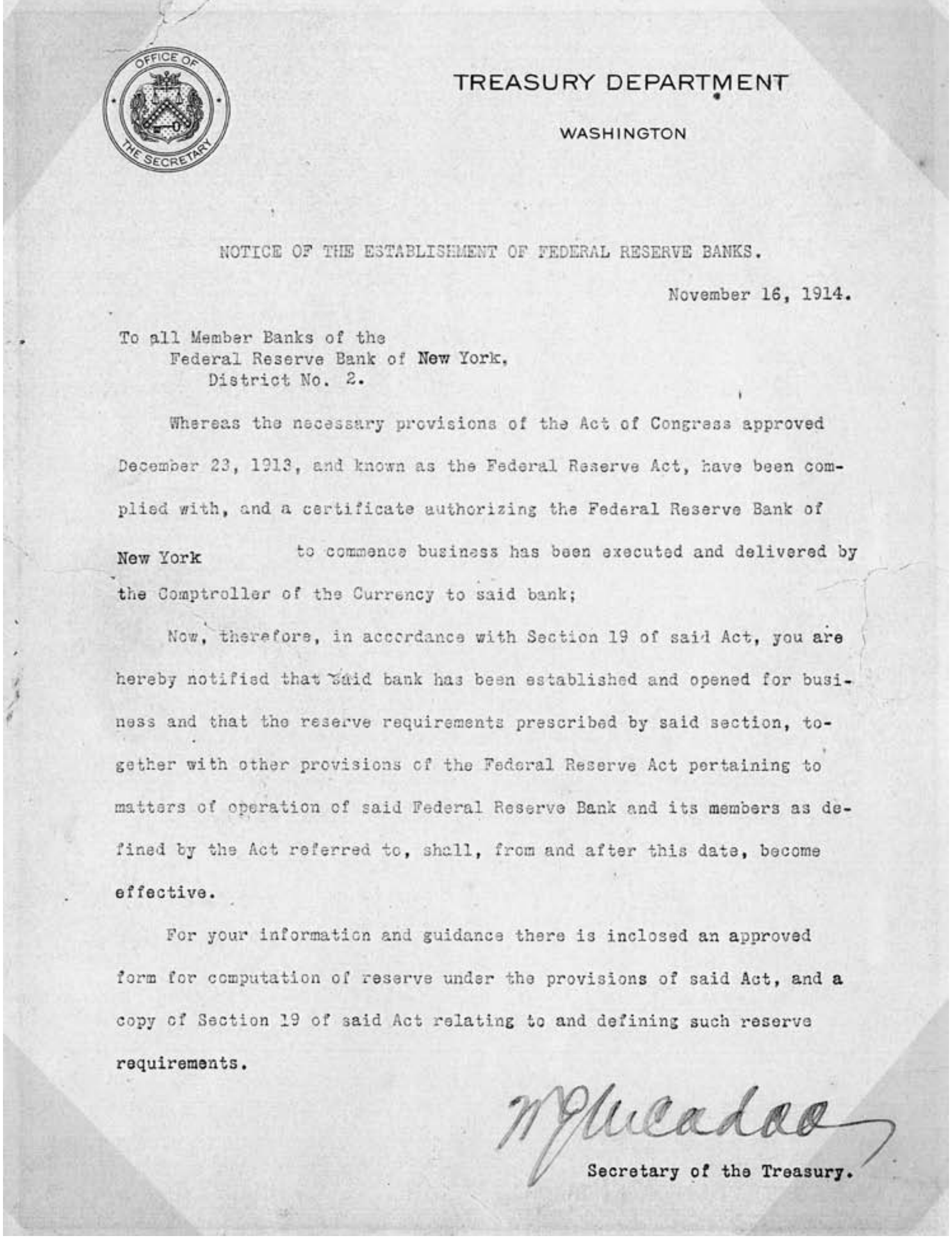
But for a better understanding of the difficult world in which the Fed would operate, it is more useful to consider what President Wilson had to say. His comment is inscribed below a bronze bas-relief of the President at the formal entrance to the Federal Reserve Board. He declared, "We shall deal with our economic system as it is, and as it may be moderated, not as it might be, if we had a clean sheet of paper to write upon, and step by step, we shall make it as it should be."

While we often speak in the abstract of "the Fed" in discussing its operations, it is guided not just by one maestro, chairing the Board—a Paul Volcker, Alan Greenspan or Ben Bernanke. Taking its current form in 1942, the key policy-making institution is the Federal Open Market Committee (FOMC), composed of the seven members of the Federal Reserve Board, the president of the Federal Reserve Bank of New York and four rotating Reserve bank presidents. Even those presidents not on the committee attend and contribute to the discussion. Again, this structure reflects the federal nature of the Fed, and the decision-making process draws upon input from the staffs of all the regional banks.

The tasks of the Fed were defined by the Federal Reserve Act of 1913 that laid out two basic objectives: price stability and financial stability. In 1977, an amendment to the 1913 Act added maximum employment to these mandates. Until the crisis of 2008, the Fed was said to have a "dual mandate" of price stability and full employment, but the financial collapse brought the third task of financial stability back to the fore. For some decades, such as the 1920s, the 1950s and the 1990s, these goals seemed easily fulfilled; while in others, such as the 1930s, the 1970s and the most recent decade, they seemed nearly impossible to jointly attain.

These contrasting decades nicely highlight the contrasting policies that the Fed has pursued to fulfill its mandate. There are sets of policies for "ordinary" times and sets of policies for "extraordinary" or "crisis" times, the latter having often re-shaped the Fed's mandate. The extraordinary times may be summarized as six "Greats": (1) the Great War, World War I; (2) the Great Depression; (3) the Second Great War, World War II; (4) the Great Inflation; (5) the Great Moderation and (6) the Great Recession.

Although familiar with the crises of the 19th century, the founders of the Fed could not have imagined the extraordinary times of the next 100 years. They had been careful to ensure that the Fed would maintain a certain degree of independence from the government, a feature that today is regarded as essential for the success of any central bank in meeting its mandates. However, in both World War I and World War II, the Fed quickly


TREASURY DEPARTMENT

WASHINGTON

NOTICE OF THE ESTABLISHMENT OF FEDERAL RESERVE BANKS.

November 16, 1914.

To all Member Banks of the
Federal Reserve Bank of New York,
District No. 2.

Whereas the necessary provisions of the Act of Congress approved December 23, 1913, and known as the Federal Reserve Act, have been complied with, and a certificate authorizing the Federal Reserve Bank of New York to commence business has been executed and delivered by the Comptroller of the Currency to said bank;

Now, therefore, in accordance with Section 19 of said Act, you are hereby notified that said bank has been established and opened for business and that the reserve requirements prescribed by said section, together with other provisions of the Federal Reserve Act pertaining to matters of operation of said Federal Reserve Bank and its members as defined by the Act referred to, shall, from and after this date, become effective.

For your information and guidance there is inclosed an approved form for computation of reserve under the provisions of said Act, and a copy of Section 19 of said Act relating to and defining such reserve requirements.

W G McAdoo
Secretary of the Treasury.

Federal Reserve Bank of New York, Curating Section

Notice from Secretary of the Treasury William G. McAdoo to member banks announcing the Federal Reserve Bank of New York.

relinquished its independence in favor of assisting the Treasury with war finance. Ensuring that interest rates would remain low for the duration of the war brought on inflations that, though they were eventually brought under control, represented a sharp departure from the Fed's initial guiding principles.

Most scholars concur that the Great Depression represented the most important policy failure by the Fed. Too concerned first about taming the booming stock market of 1928–1929, the Fed amplified an initial recession in 1929. Its continuing hawkish policy reflected both a misunderstanding of how to measure the responses of banks and financial markets to its actions and a need to keep the US on the gold standard. As unemployment rose to shockingly high levels and GDP declined at rates never seen before or after, Congress passed a raft of banking bills in the mid-1930s collectively known as the New Deal. Commercial and investment banking were split apart, deposit insurance was provided by a new agency, the Federal Deposit Insurance Corporation (FDIC), and most markets came under federal surveillance. For the Fed, there was a structural transformation that moved authority away from the Federal Reserve banks and concentrated it with the Board in Washington.

The New Deal provided a rigid regulatory framework for the banking system. The calm of the 25 years after World War II have often been attributed to the New Deal rules, but the demands for finance led to the expansion of new, less-regulated financial institutions that exposed the financial system to increased risk. Most importantly, the New Deal system was not designed to function under rising inflation. The "Great Inflation" that characterized the 1970s resulted in the total collapse of the thrift industry and many banks. Bringing inflation under control caused two sharp and painful recessions in the early 1980s. But, the lessons learned led to new approaches for the Fed to monetary policy that helped guarantee a very low and stable inflation rate.

Beginning in the 1990s, the US economy experienced both low inflation and steady growth. This "Great Moderation," combined with lax regulation and relatively easy monetary policy, is believed by some to have led to the housing boom of the 2000s. However, the causes of the "Great Recession" remain a bitter source of debate, with a variety of explanations offered. But no matter what the final verdict, the Fed has been induced—in large part by the Dodd-Frank Act of 2010—to reconsider what are appropriate policies to meet its triple mandate of price stability, financial stability and full employment. $

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Sources

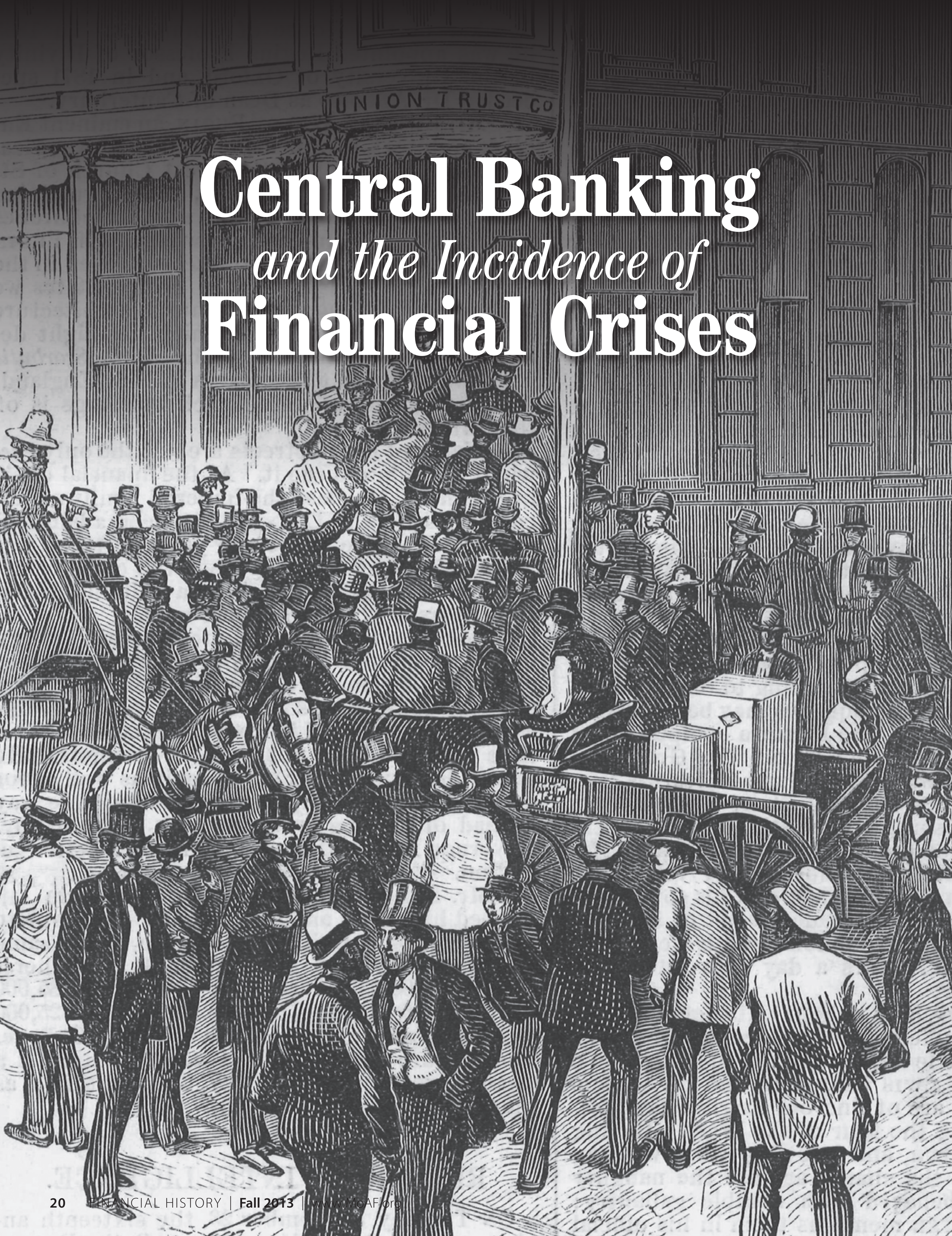
Friedman, Milton and Anna J. Schwartz. *A Monetary History of the United States, 1867–1960.* Princeton University Press, 1963.

Meltzer, Allan H. *A History of the Federal Reserve.* University of Chicago Press: Chicago, 2003, Vol. 1: 1913–1951.

White, Eugene N. "To Establish a More Effective Supervision of Banking: How the Birth of the Fed Altered Bank Supervision," in Michael D. Bordo and William Roberds, eds., *A Return to Jekyll Island: The Origins, History and Future of the Federal Reserve.* Cambridge University Press: Cambridge, 2013, pp. 7–54.

Wicker, Elmus. *The Great Debate on Banking Reform: Nelson Aldrich and the Origins of the Fed.* Ohio State University Press, 2005.

Central Banking *and the Incidence of* Financial Crises



By Richard Sylla

THE CENTENNIAL ANNIVERSARY in 2013–2014 of the founding of the Federal Reserve System, America's central bank, is a fitting occasion to consider the question: Why do we have a central bank? To many people, the answer is far from obvious. Here I want to discuss in particular one good reason why we have a central bank, namely that our history as a nation shows that central banks reduce the incidence of financial crises.

The Fed and Its Critics in the Recent Crisis

During the financial crisis of 2007–2008, the Fed acted dramatically to prevent a financial meltdown. It made currency swaps with other countries' central banks to alleviate dollar shortages overseas. It made loans, often termed "bailouts," to US and foreign financial institutions to prevent them in one way or another from failing. It more than doubled the size of its balance sheet in 2008–2009 by purchasing government and mortgage-backed securities with the intent of providing ample liquidity and keeping interest rates low to promote recovery from the economic recession triggered by the financial crisis.

In the aftermath of the crisis, the Fed again has nearly doubled the size of its balance sheet through further securities purchases, termed "quantitative easing." Despite these actions, the recovery from the crisis has been protracted and rather anemic. So the Fed announced in September, to Wall Street's and others' surprise, that it intended to keep on pursuing its low interest policies as long as unemployment remained too high and inflation showed no signs of rearing its ugly head.

The Fed's unprecedented actions have produced a backlash. Its critics charge the central bank with creating the financial crisis by keeping interest rates too low from 2001 to 2006, thereby underwriting the housing bubble that collapsed in 2007 and 2008. In recent years, possibly with some inconsistency, the critics have claimed that the central bank has too much power and that its quantitative easing policies have proven ineffective. Congress responded to the first charge by reining in some of the Fed's powers in the Dodd-Frank Act of 2010. But that did not go far enough to please a vociferous critic of the Fed such as former congressman Ron Paul, who in 2009 published a book entitled *End the Fed*, a not-so-thinly-veiled policy recommendation.

Illustration titled "Run on the Union Trust Company," from the October 11, 1837 issue of *Harper's Weekly*.

Deja Vous

If the Fed's actions during the recent crisis were unprecedented, Ron Paul's recommendation to get rid of it was not. Early in US history, Americans got rid of not one, but two central banks. So our country has some experience in ending central banks. It also has even more experience in creating new central banks. We have created three, and ended only two.

Congress chartered our first central bank, the Bank of the United States, in 1791 on the recommendation of the first Secretary of the Treasury, Alexander Hamilton. A decade earlier, while he was serving as an officer in the Continental Army, Hamilton had already (at age 24) made himself an expert on modern finance in a new nation whose financial arrangements were decidedly pre-modern. In 1781, during what turned out to be the late stages of the War of Independence, Hamilton wrote a long letter to Robert Morris. Morris had just been appointed by Congress to clean up the financial mess created by over-issuing paper Continental currency to the point that it became worthless. That problem had virtually destroyed the credit of the United States with foreign supporters of the American cause and with its own citizens.

Hamilton's solution, based on European precedents, was to create a national or central bank — one he already had termed the "Bank of the United States" — that would create a sound currency, attract foreign loans, lend money to Congress to finance the war effort and stimulate the growth of the American economy. He told Morris:

> The tendency of a national bank is to increase public and private credit. The former gives power to the state for the protection of its rights and interests, and the latter facilitates and extends the operations of commerce among individuals. Industry is increased, commodities are multiplied, agriculture and manufactures flourish, and herein consist the true wealth and prosperity of a state. Most commercial nations have found it necessary to institute banks, and they have proved to be the happiest engines ever invented for advancing trade. Venice, Genoa, Hamburg, Holland and England are examples of their utility.

Remarkably, Hamilton had not been to Europe (and never would), and when he wrote Morris neither the colonies nor the new nation had ever had a modern bank of any kind. Shortly after Hamilton's letter, Morris would recommend that Congress create the country's first modern bank, the Bank of North America. It opened at the beginning of 1782.

Ten years later, Hamilton persuaded Congress to charter, and President Washington to approve, his far larger Bank of the United States (BUS). The BUS, along with a restructured national debt and the specie-based dollar, became a component of the new nation's financial architecture. Owned 20% by the United States, the BUS lent to the government and to the private economy, established a branch network throughout the nation giving the country nationwide banking facilities and acted to regulate the expansion of credit by state-chartered banks. Economically, by all accounts, the BUS was a great success.

Politically, it was a different matter. Those who opposed its creation in 1791 continued to regard it as unconstitutional. Two decades later, when the BUS's 20-year charter came up for renewal, they were joined in the opposition by state legislative and banking interests. If these interests could get rid of the central bank, they would get rid of a competitor and a regulator, and they would likely get the US government's banking business. It was a win, win, win proposition. Despite the support of President Madison, who had opposed the BUS as a congressman in 1791, and also that of Treasury Secretary Gallatin, the BUS lost its bid for re-chartering by one vote in the Senate.

That was in 1811. A year later came the War of 1812 with Great Britain, and without a central bank the Treasury encountered a host of problems in financing the war. Chastened, when the war was over Congress chartered a second Bank of the United States in 1816, an enlarged version of the first BUS. Like its predecessor, the second BUS was an effective central bank for most of the period of its 20-year charter. It stabilized domestic and foreign exchange rates, managed a rapid downsizing of the US national debt, established an even larger nationwide branch network than that of the first BUS, and presided over a happy period of marked, non-inflationary economic growth.

But such achievements were not sufficient to placate the second BUS's political foes, who resurrected the very same coalition of principle (a strict construction of constitutionality) and interest (state banks had much to gain from ridding themselves of a competitor and regulator) that had been raised in 1811 debates on re-chartering the first BUS. The political opposition to the second BUS had a powerful champion in the popular President, Democrat Andrew Jackson, who said he had long-standing suspicions about banks and banking in general since he had read about the 1720 South Sea Bubble crisis in England.

Jackson's Whig Party opposition attempted to embarrass him before he came up for re-election in 1832 by pushing through Congress a bill to give the BUS an early renewal of its federal charter, which would not expire until 1836. The bill passed both the House and the Senate with comfortable majorities, but the strategy backfired when Jackson vetoed it in the summer of 1832. His veto failed to be over-ridden by the supermajorities required, and when Jackson won re-election that fall he felt he had a mandate to begin scuttling the second BUS well before its charter expired in 1836. Thus came to an end America's second central bank.

Enter the Fed

From 1836, when the second BUS charter expired, to 1914 when the third BUS, the

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Collection of the Museum of American Finance

© Rudy Sulgan/Corbis

The three central banks in the nation's history (top to bottom): The Bank of the US, the Second Bank of the US and the Federal Reserve.

Fed, opened for business, the United States was without a central bank. Attempts early in this eight-decade period to charter a new one failed. Congress, in 1846, enacted a so-called "Independent Treasury System" in which the government would keep its funds apart from the country's banking system. But over time the Treasury adopted the practice of moving its funds into banks during financial stringencies, so the Independent Treasury became something of a substitute for a central bank. Bank clearinghouses were another such partial substitute; by issuing clearinghouse loan certificates to their members during stringencies, bank reserves could be extended to meet the public's demands for cash. Finally, after Congress created the National Banking System during the Civil War, its pyramided reserve system concentrated reserves in New York City national banks, which in that sense served as the central reserves of the expanding US banking system.

The financial panic of 1907, a major embarrassment because the United States by then had become the world's leading and most dynamic economy, revealed that none of the substitutes for a central bank, or even all of them together, could prevent or do much to alleviate such panics. In the panic's wake, Congress studied the world's financial systems and determined to create a new central bank, the Federal Reserve. President Woodrow Wilson signed the bill late in 1913, and the Reserve Banks and System came on stream a year later.

Are Central Banks a Bad Idea?

Economists, like other social scientists, find it difficult, if not impossible, to replicate the controlled laboratory experiments that foster so much progress in the natural sciences. But history can help, for it demonstrates a variety of experiences. In the case at hand, we have a country, the United States, which had three periods of central banking in its history, and a couple of periods without a central bank.

One of the main arguments given by proponents of central banking is that a central bank can prevent financial crises from occurring, as well as alleviate the negative economic effects of such crises if they do occur. To test that hypothesis as a natural scientist might do in a laboratory experiment, the main requisite would be evidence on the incidence of financial crises from the laboratory of history.

The accompanying table of US financial crises from 1792 to 2007–08 provides such evidence. It lists 15 financial crises over the course of US history taken from the accounts of several reputable historical sources. A good scientist tries to be careful to include evidence that works against the hypothesis he suspects has validity. Since I suspect that central banks do indeed prevent or alleviate the incidence of financial crises, I chose the sources for the table in part because they identify crises in the central-banking periods of US history that are not widely considered to be

major crises. Thus, during the Fed era the table lists crises as occurring in 1973–75, 1979–82 and 1982–87, even though those years are not usually regarded as periods when bank failures and/or stock market crashes did substantial damage to the US economy. In fact, during and after the recent 2007–08 crisis, it was sometimes remarked that the crisis was shocking in part because the United States had not experienced a comparable financial crisis since the Great Depression of the 1930s. Such views would exclude the three crises I have included.

How should we analyze and interpret the evidence from history? A simple first pass at this is revealing. From the first financial crisis in 1792 to the present is a period of 222 years. For 140 of those years, the country had a central bank: the first BUS in the 20 years from 1792 to 1811; the second BUS in the 20 years from 1817 to 1836; and the Fed for the most recent 100 years, 1914–2013. During the 140 years of central banking there were seven crises, or one in every 20 years on average.

The periods of US history without a central bank were 1812-16 (five years) and 1837–1913 (77 years), for a total of 82 years. During those 82 years there were eight financial crises, or one crisis every 10.25 years on average.

Thus a lesson of US history is that financial crises were roughly twice as frequent when the country did not have a central bank as they were when it did. If we were to exclude the three crises of the 1970s and 1980s that are not widely regarded as particularly damaging — perhaps because there was a central bank to counteract them — then the results would be even more lopsided. The central banking eras would then have had five crises in 140 years, or one every 28 years on average, instead of one every 10-plus years without a central bank.

Is the US experience exceptional? For the United Kingdom, the Kindleberger-Aliber source cited in the table identifies 16 financial crises from 1793 to 2008, rather similar to the US experience. A potential complication is that the UK's central bank, the Bank of England, was present for that entire period, so it would seem one is not able to compare periods with and without a central bank, as we can for the United States. But Forrest Capie, the official historian of the Bank of England, and other British financial historians argue that the Bank of England did not assume central banking responsibilities until the 1860s, just before a major crisis in 1866.

Accepting that argument, the UK experienced nine crises in the 73 years from 1793 to 1865, or one every eight years. From 1866 to 2013, the UK had seven crises in 148 years, or a crisis on average once every 21 years. Thus the UK's overall experience was similar, with differences in timing, to that of the United States. Financial crises were more frequent without than with a central bank.

As we observe the centenary of the Federal Reserve System, we would do well to remember that one of the main theoretical arguments for a central bank has always been that by acting as a lender of last resort to other banks and financial institutions, such a bank can both prevent crises and alleviate their economic damage if they do occur. More than two centuries of experience with and without central bank on both sides of the Atlantic provides substantial empirical support for that argument. $

US Financial Crises, 1789–2013

Year(s)	Related to:
1792	Speculation in new US debt
1814	British invasion and bank suspensions
1819	Postwar economic adjustments
1837–39	Speculation in public lands, problems with state debts
1857	Public lands, railroads
1873	Railroads
1884*	Brokerage house failures
1890*	Fallout from Baring crisis in Britain
1893	Run on Treasury gold reserves
1907	Trust company failures
1929–33	Stock crash and bank failures
1973–75	OPEC and currency crises
1979–82	Double-digit inflation, LDC debts, OPEC, real estate and farmland
1982–87	Real estate, stock crash, S&L problems
2007–08	Subprime real estate loans and securitization

Source: Charles P. Kindleberger and Robert Z. Aliber, *Manias, Panics, and Crashes* (6th ed., 2011), Appendix A, with additional US crises not noted by Kindleberger, but noted by O.M.W. Sprague, *History of Crises under the National Banking System* (1910) and Elmus Wicker, *Banking Panics of the Gilded Age* (2000) designated by *.

Dr. Richard Sylla, Chairman of the Museum of American Finance, is the Henry Kaufman Professor of the History of Financial Institutions and Markets and a professor of economics, entrepreneurship and innovation at the New York University Stern School of Business.

Sources

Capie, Forrest. "Financial Crises in the UK during the 19th and 20th Centuries," *Bankhistorisches Archiv* 47 (2009), pp. 31–42.

Cowen, David J. *The Origins and Economic Impact of the First Bank of the United States, 1791–1797.* Garland, 2000.

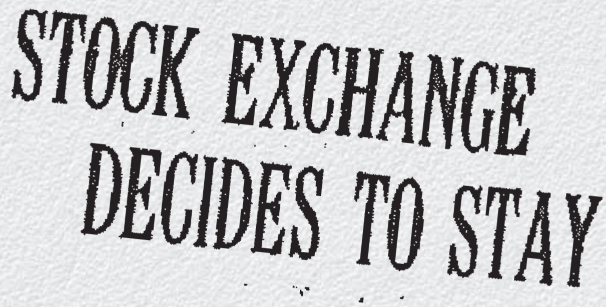
Hamilton, Alexander. *The Papers of Alexander Hamilton,* H. Syrett, ed. 27 volumes. Columbia University Press, 1961–87.

Hammond, Bray. *Banks and Politics in America, from the Revolution to the Civil War.* Princeton University Press, 1957.

Sylla, Richard. "Comparing the UK and US Financial Systems, 1790–1830," in J. Atack and L. Neal, eds., *The Origin and Development of Financial Markets and Institutions.* Cambridge University Press, 2009.

Sylla, Richard, Robert E. Wright and David J. Cowen. "Alexander Hamilton, Central Banker: Crisis Management and the Lender of Last Resort in the US Panic of 1792." *Business History Review* 83 (Spring 2009), pp. 61–86.


O'Brien Vetoes 2 Taxes
On Wall St.; Exchange
Gives Up Move to Jersey


STOCK EXCHANGE
DECIDES TO STAY

The Phantom New Jersey Stock Exchange of 1933

By Ethan Namvar

In the wake of the stock market crash of 1929 and the Great Depression that followed, New York City's municipal government decided to levy new taxes on stock gains to generate funds needed to support the city in those difficult economic times. Faced with pressure from brokers, stock traders and other business people, the New York Stock Exchange (NYSE), in protest of the new taxes, threatened to move its trading floor from New York to New Jersey.

The NYSE had been based in New York City since its inception in 1792, but the city's new taxes on stock gains — which amounted to a four cent per share stock transfer tax and a 5% tax on the gross earnings of stockbrokers — prompted NYSE President Richard Whitney to initiate the relocation of the trading floor to Newark, New Jersey. The state of New York was already imposing a three cent per share tax on stocks selling under $20 and a four cent payment on those selling over $20. Furthermore, a tax of four cents per share on lower-priced stocks and five cents per share on higher-priced stocks was already required by federal law.

Many who worked on Wall Street believed the additional city taxes were excessive, and because Americans were becoming increasingly literate in stock trading and speculation since the end of World War I, the additional taxes impacted more people. The city expected to gain an $11 million dollar windfall from the new taxes, which would support its unemployed and poor, as well as fund wages and other compensation to city workers from September 1, 1933 through February 1934.

The potential cost of moving the NYSE to Newark, however, would be steep. The relocation itself was estimated to be $15,000 to $20,000, and the lease for the building was to cost $25,000 for the first year, with a renewal cost of $50,000 after the first year and $100,000 for each subsequent year. Additional expenses would include $50,000 to $100,000 to remodel the Newark City Center into a stock exchange, which would entail converting a meat and vegetable market into a fully-equipped stock trading floor. Such high costs, as well as the remarkable loss in prestige if the exchange were to leave New York City, led many to believe the move was simply a bluff.

But it was not a bluff. Negotiations for the site of the exchange were approved by J.S. Rippel, president of the Newark Clearing House Association and leader of the negotiations between Newark Commissioner Anthony F. Minisi's committee and the New York Stock Exchange committee. Construction began upon the final approval of Minisi and Howard Froelick, chairman of the organizing committee for the new market.

According to Froelick, the new Newark exchange was expected to "provide a trading floor substantially larger than that of the New York Stock Exchange." The second floor of the building was removed in order for the main room of the exchange to be 40 feet taller, including a mezzanine and balcony. The building's old flooring was to

be replaced by a marble-like composition to provide the new exchange with the same air of pedigree and prestige as the exchange's New York City site. Enthusiasm for the new site ran high, as Froelick noted that, "Contractors have been engaged and the work for preparing the new trading floor will begin immediately. I fully expect that trading a substantial number of important stocks will inaugurate on Monday, October 2."

Three shifts of 200 workers had begun renovations on the old Centre Market. Froelick even assured Newark Mayor Meyer C. Ellenstein that the move to Newark was guaranteed, just a mere two hours before New York City Mayor John P. O'Brien had decided to veto the stock taxes, thus nullifying the need for the move.

"We are positively not abandoning the Newark project," Ellenstein quoted Froelick as saying. "We will open the New Jersey Stock Exchange in Centre Market, Monday, October 2."

The city of Newark and the state of New Jersey stood to achieve great economic gains from this move. The NYSE in 1933 had nearly 1,400 members and 2,000 additional staff. Another 35,000 worked at other stock exchange houses. With the move, all members and staff would also be relocated to the new site in New Jersey, spurring business and job growth. The *Sunday Call* newspaper estimated that 100,000 new workers would be employed to staff telegraph and telephone offices, restaurants, barber shops and retail stores in the new trading center. Local banks were primed to issue new loans to incoming traders and employees.

In terms of execution, the most active stocks would be transferred to the new exchange first, with the final goal of 30 issues being traded at the new site, compromising about 75% of all trading activity. The top stocks at the time to be transferred first included General Motors, Radio Corporation of America, United Aircraft, International Telephone, Commercial Solvents, United States Steel, Chrysler Standard Brands, International Nickel and Montgomery Ward. Western Union high-speed tickers would carry all quotes with assistance from the New York Quotation Company.

The move to Newark faced opposition not only from the municipal government of New York, but also from within Newark. Theodore Cohen, representing the City Center Corporation (residents of Centre Market, the future site of the new exchange) in Ellenstein's office, led a group of individuals in a suit against the city of Newark with the goal of remaining in its location in Centre Market. The timing of the litigation coincided with the expected opening of the new site. Roughly two months before the move to Newark was to be completed, the city of Newark issued a dispossess suit against City Center Corporation. Judge Cecil H. MacMahon's ruling ordered the corporation to vacate the building immediately. The corporation filed an appeal, and its representatives obtained a writ from New Jersey Chancery Court Vice Chancellor John J. Fallon to terminate construction work until an agreement could be reached.

Exchange members threatened to withdraw their proposal should the Newark city officials fail to reach a deal with the City Center Corporation, causing deep economic losses to the city. Newark Mayor Ellenstein directed exchange officials not to negotiate with representatives of the corporation and assured them that the corporation's demands would not be met "under any circumstances."

Ellenstein and the corporation negotiated overnight and into the early morning hours in order to reach a compromise. Prominent business people and bankers, fearful of the potential future losses should the exchange proposal be withdrawn, gathered at the mayor's office "to be of assistance to him in any plan he had to ensure establishment of the exchange [in Newark]."

Minisi advised the business people and exchange officials that, "the matter has reached a stage where it will be settled amicably." The construction and renovation costs were estimated to be $200,000 in addition to the $6 million already spent by the city of Newark in preparations for the exchange's relocation. The NYSE had agreed to pay the renovation costs, and work had commenced even up to the final moment of the decision by Mayor O'Brien to veto the New York City stock taxes (*see Figures 1 and 2*).

Mayor O'Brien eventually relented on the new taxes due to the pressure applied by bankers through their control of a $74 million loan the city applied for, as well as the reversal of opinion on the cost/benefit analysis of the new taxes by O'Brien's financial adviser, Samuel Untermyer. The bankers had yet to guarantee that the loan would be issued. The following weeks would require $25 million from the loan to cover expenses, as well as the city's payroll

NEW JERSEY STOCK EXCHANGE

Schedule showing general and other expenses for fiscal year

October 1, 1933 to September 30, 1934

Alterations and construction at leased premises all of which reverted to lessor or was abandoned upon cancellation of lease	$132,483.80
Payment to leasor in connection with cancellation of lease of premises	20,000.00
Furniture and fixtures abandoned upon cancellation of lease	929.00
Legal expense	25,000.00
Power, heat, water, etc.	3,337.62
Contributions	200.00
Insurance	784.43
Miscellaneous	2,890.36
Total	$185,625.21

Figure 1. New Jersey Stock Exchange schedule showing general and other expenses for fiscal year October 1, 1933 to September 30, 1934.

NEW JERSEY STOCK EXCHANGE
May 25, 1934

Schedule "A" - Detail of Expenses

Alterations and Construction		$132,993.05
All alteration and construction expenses were paid for by the N.Y.S.E.Building Co. The above amount appears on the books of the New Jersey Stock Exchange in "Accounts Payable".		
The figure is made up as follows:		
Marc Eidlitz & Son., Inc.	$85,804.06	
Cross & Cross - Architect's Fee	2,424.78	
Meyer, Strong & Jones - Engineering Services	2,101.66	
Western Union Telegraph Co.-	9,740.69	
New York Telephone Co.	2,163.00	
New Jersey Telephone Co.	30,096.49	
Blueprints	539.50	
Miscellaneous	372.87	
Less Supplies sold to NYSE Bldg.Co.	250.00	
Rent (Centre Market Building)		25,000.00
Paid to the City of Newark under terms of lease.		
Settlement of Lease		20,000.00
Paid to the City of Newark under terms of lease, in lieu of restoring premises to original condition.		
Legal Expense		25,000.00
Paid to Carter, Ledyard and Milburn.		
Services		4,100.00
Payments to the following:		
Wm. Lehman (City of Newark) Architect's Fee	$ 1,000.00	
D. K. Worcester (N.Y.S.E.)	1,000.00	
A. A. Harris (Bldg.Co.)	500.00	
E. J. Mitchell (")	500.00	
J. L. Cassidy (")	500.00	
H. D. Robinson (N.Y.S.E.)	500.00	
E. A. Rollka (Bldg.Co.)	100.00	
Contributions		200.00
Payments to the following:		
Newark Police and Fire Pension Fund	100.00	
Police Mutual Aid Society	100.00	
Wages		10,102.32
Payments made by the following companies. The amount of $10,102.32 appears on the books of the New Jersey Stock Exchange in "Accounts Payable"		
New York Stock Exchange	$ 1,048.64	
N.Y.S.E.Building Co.	6,769.97	
Stock Clearing Corpn.	1,226.76	
New York Quotation Co.	1,052.50	
N.Y.S.E.Safe Deposit Co.	4.45	

Schedule "A" (Continued)

Power, Heat, Light, etc.		$ 3,300.81
Made up of payment to City of Newark	$ 500.00	
Accounts payable to N.Y.S.E.Building Co.	2,935.81	
Less Accounts Receivable from City of Newark, N.J.	135.00	
Insurance		348.77
Insurance paid for by N.Y.S.E.Building Co. Appears in "Accounts Payable" to N.Y.S.E. Building Co.		
General Expenses		2,816.90
Printing, stationery, postage uniforms, Traveling expenses, telephone service, miscellaneous supplies.		
Paid to City of Newark, N.J.	$ 735.32	
Accounts Payable to New York Stock Exchange	395.37	
N.Y.S.E.Building Co.	1,686.21	
Federal Tax		3.68
Tax on checks deducted from bank balances	.28	
Accounts Payable to N.Y.Stock Exchange (Tax on firearms)	3.40	
		$223,865.53

Figure 2. New Jersey Stock Exchange Schedule "A" detail of expenses, May 25, 1934.

for the coming month. Untermyer, the architect of the $27 million revenue program based upon the new tax revenues, told O'Brien that the new taxes would cost the city more than the increase in tax revenue. The city stood to lose between $30 and $50 million a year should the NYSE move occur.

Further, job losses in the thousands, at a time when unemployment was at unusually high levels, coupled with a deterioration of New York City real estate values would have been too high a cost to bear. In fact, without the new taxes or the assured loans, the city did not have sufficient security to request new loans and, thus, was forced to lay off contract employees in order to protect funds for payrolls.

Untermyer, in addressing the issue of lost revenue from the stock taxes, mentioned that other tax initiatives could be implemented including a tax program on property, as well as a tax of $2 per square foot on electric signs. Other possibilities included tolls on vehicle traffic on bridges over the East River and the Harlem Ship Canal. Ironically, these tax initiatives would have raised $14 million per year for the city, or $3 million more than the estimated stock tax revenues.

Meanwhile, Newark officials and residents excitedly anticipated the move of the exchange floor to the city. Local real estate boomed. A number of New York firms had signed leases for offices in Newark. The future site of the exchange, the Centre Market building, was undergoing remodeling with 500 workers on the job.

The city was expecting a flood of new employees into Newark and its suburbs, which would consequently provide a boost to local real estate values and provide a new income stream of revenue for local commerce. Real estate rentals were expected to increase, with a possibility of 100 vacant floors being rented. The city would benefit further from new taxes on the increased income, allowing the city to pay city workers' wages and meet other obligations. Meanwhile, in nearby New York City, the municipal government was squeezed even to find sufficient funds to cover short-term costs. Several prominent brokers proclaimed the move "the greatest thing that ever happened for Newark."

Although one-quarter of all financial workers already lived in New Jersey, the NYSE move to Newark would be a herald of new fortune and growth for the city in

both new jobs and businesses. Further, it would mean that one of the city's most controversial landmarks — its "white elephant" market center — would finally be reconstructed. The City Center had been a money pit for the city of Newark, with construction costs at $5 million, yet failing as a marketplace for groceries. It also owed the city $400,000 in unpaid rent and taxes. The site had previously been a public market and expanded with the city of Newark from its original location over the old Morris Canal. Newark residents were surprised and excited, as well as skeptical, about the plans to convert the City Center fruit and vegetable market into the nation's major financial center.

The financial sector was also preparing for the move. Operations for the New York Stock Clearing Corporation were to be set up in Pennsylvania Station in Jersey City, and security firms were advised to begin immediate preparations for telephone and other services in order to connect with the New Jersey clearinghouse headquarters.

Yet the move to Newark was not to take place. Once New York City Mayor O'Brien vetoed the new stock taxes, plans to move the NYSE floor to Newark were abandoned. While New York was relieved to keep the NYSE, Newark reeled from the news. The city had incurred losses from the work and wages associated with the renovations of the City Center. Furthermore, the expected budget had to be shrunk to account for the loss of expected business and revenue that the NYSE move would have brought.

Newark budget director Maurice Stephenson was responsible for cutting the budget to meet the revenue estimates for 1934. A number of city departments and employees were severely affected, including the United States Volunteer Life Saving Corps, the dock department, six Newark police chaplains (whose $1,980 annual salaries were sacrificed as a part of the city's compensatory austerity plan) and a number of police surgeons.

The average New York City citizen also suffered due to the decision to keep the NYSE trading floor in the city. In place of the vetoed stock taxes, new taxes would be implemented directly on citizens including taxes on water use, property ownership, roads and taxis. Bankers were the ultimate winners in the grand scheme, as they no longer had to worry about paying the new stock taxes.

Richard Whitney used the power of his position within the exchange among board members, as well as in government among elected officials, to his advantage throughout the relocation discussions and negotiations. The "gentle" pressure Whitney applied to O'Brien through his letters, later published in major newspapers in New York and New Jersey, became widespread.

After O'Brien's decision to impose the new stock taxes, Whitney, in one of his letters to the mayor, politely advised O'Brien that, "if you veto these bills, I will promptly recommend to the governing committee of the New York Stock Exchange, which will hold its first meeting today, that the plan for opening of a trading floor in Newark on October 2 be dropped."

Despite the calls for relocation and the preparations for the new trading floor at City Center in Newark, New Jersey, the NYSE trading floor remained in the heart of New York City. $

This article is adapted from "The Rise and Fall of the New Jersey Stock Exchange" by Ethan Namvar, which was published in the Summer 2013 edition of the Journal of Trading. *Namvar is a Lecturer at the Haas School of Business, University of California, Berkeley in Berkeley, CA. He can be reached at namvar@haas.berkeley.edu.*

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Sources

Carter, Ledyard, & Milburn Counselors at Law, Legal Correspondence, New York Stock Exchange Archives, Series 2.

Edward B. Smith & Co., Financial Memorandum, New York Stock Exchange Archives, Series 2.

Franklin, A. H., Accounting Department, Stock Clearing Corporation, Financial Memorandum, New York Stock Exchange Archives, Series 2.

Marc Eidlitz & Son Incorporated, Minutes Covering Meeting of September 22nd Held At The Office Of The New York Stock Exchange Building Company, New York Stock Exchange Archives, Series 2.

Marc Eidlitz & Son Incorporated, Alterations To Centre Market, N.J. Memorandum, New York Stock Exchange Archives, Series 2.

Namvar, E., "The Rise and Fall of the New Jersey Stock Exchange." *The Journal of Trading*, Summer 2013, Vol. 8, No. 3, pp. 49–56.

Nash, Warren B., Office of the President, New York Stock Exchange Building Co., New York Stock Exchange Archives, Series 2.

New Jersey Stock Exchange, Governing Committee Minutes, New York Stock Exchange Archives, Series 2.

New York Stock Exchange Archives, Series 7. "O'Brien Vetoes 2 Taxes on Wall St.; Exchange Gives Up Move to Jersey." *Herald Tribune*, September 24, 1933: 1.

__"O'Brien Vetoes Stock Tax; Exchange Decides to Stay; New Payroll Crisis Near." *New York Times*, September 24, 1933: 1.

__"Exchange Acts To Stay in N.Y." *Newark Star Eagle*, September 24, 1933: 1.

__"Court Issues Order to Halt Exchange Work in Market Here." *Newark Sunday Cal*, September 24, 1933: 1.

__"Moving Exchange to Newark May Fill Up Many Vacant Offices." *Newark Sunday Call*, September 24, 1933: 1-2.

__"Writ Issued to Halt Exchange in Market." *Newark Sunday Call*, September 24, 1933: 1.

__"Exchange Picks Newark Site; Taxi and Water Taxes Signed." *The Sun*, September 24, 1933: 1.

New York Stock Exchange, Billing Correspondence, New York Stock Exchange Archives, Series 2.

New Jersey Stock Exchange, Financial Correspondence, New York Stock Exchange Archives, Series 2.

Office of the Treasury, New Jersey Stock Exchange, Financial Memorandum, New YorkStock Exchange Archives, Series 2.

Payson, L.G., Second Vice President, Stock Clearing Corporation, Financial Memorandum, New York Stock Exchange Archives, Series 2.

Whitney, Richard, Office of the President, Committee on Publicity of the New York Stock Exchange, New York Stock Exchange Archives, Series 2.

Whitney, Richard, Office of the President, New Jersey Stock Exchange, Operational Memorandum, New York Stock Exchange Archives, Series 2.

Worcester, D.K., New York Stock Exchange, Memorandum, New York Stock Exchange Archives, Series 2.

Financial Speculation and America's First Financial Crisis

By Scott C. Miller

"Never did I see so universal a frenzy," Philadelphia physician Benjamin Rush wrote in his diary on August 10, 1791. "Nothing else was spoken of but Script in all companies, even by those who were not interested in it." Writing in the midst of what the Philadelphia *General Advertiser* called an "inveterate madness for speculation," Rush described the spectacular rise of "script"—certificates of subscription to the new Bank of the United States (BUS)—from an issuance price of $25 to over $300 in little over a month.

The madness began on July 4, 1791 and progressed unchecked until August 11 when, first in New York and then in Philadelphia, the distemper broke. Just 24 hours after script closed at $312, Philadelphia broker Nalbro Frazier informed a correspondent that the asset was selling for less than $100, if bids were being offered at all.

Philadelphians reported newly-ruined speculators aimlessly wandering the streets, and doctors attending men believed to have literally lost their senses. Grizzled Revolutionary War veterans begged for assistance at the feet of Treasury Secretary Alexander Hamilton while other men, consumed by their failings, hanged themselves. Barely three years after the Constitution was ratified, financial panic had come to America.

The crisis of 1791, or "Scriptomania" as it was called at the time, marked a transformational moment in American history. Hamilton's economic reforms of 1789–1791 pushed modern finance out of the merchant's office and into the streets, allowing middle- and even lower-class citizens to mobilize their meager capital in ways not previously possible. The establishment of banks, transferable bonds and public exchanges opened the door to all with money to spend. Finance was no longer a closed game. Cash, rather than status or reputation, began to determine market access.

This wider market access had a profound impact on the events of July, August and September 1791. So-called "New Adventurers," an inexperienced class of financial entrepreneurs ranging from fortune-less social climbers to working class artisans and laborers, drove script prices to unprecedented heights. While financial speculation was not democratized in any modern sense, the fact remains that the crash of August 11–12 wiped out many artisans and laborers in New York and Philadelphia, while America's financial elite emerged essentially unscathed.

Despite their narrow escape in early August, America's financial elite did not ultimately avoid the charm of script. Though Scriptomania has historically been considered a single, distinct crisis that climaxed during the second week of August 1791, it actually consisted of two distinct financial events—one driven by financial novices in August and a second perpetuated by elite financiers in early September. The new federal government also played an active role in calming turbulent markets, using different tactics during each episode. This interplay of financial, political and cultural factors foreshadowed more than two centuries of American financial crises.

BUS script went on sale July 4, 1791 amidst the flurry of Philadelphia's 15th Independence Day celebration. The timing was no accident. To many, the purchase of BUS script was both a patriotic exercise and an acquisition of a valuable financial asset. The 20,000 shares allotted for public sale sold out in a matter of hours, and in the following days script purchased for $25 nearly doubled in price. Yet after this initial surge, BUS script prices remained relatively stable through the remainder of July even as prices of US securities, the asset most closely linked with BUS script, continued to rise (see Figure 1).

That all changed as July turned to August. Script prices in Philadelphia jumped to $65 on August 2 and $135 three days later. August 5 also saw script debut in New York at $100 amidst heavy trading. The *New-York Journal* proclaimed, "The speculating mania has taken full possession of every moneyed soul," and it was hardly exaggerating. The mania accelerated day after day, and by the second week of August, historical comparisons to John Law's Mississippi Crisis (1719) and the South Sea Bubble (1720) began to make headlines across the nation.

Despite the printed warnings, script and US securities prices continued to race skyward (see Figure 2). "The rise of Bank of the United States Scrip, within these few days has been without parallel… Paper, of all descriptions, is on the rise," reported Boston's *Columbian Centinel*."

By August 10, prices in New York reached a stunning $286. Local newspapers constantly referred to the "madness" and "the present intoxication," indicating just how intense New York's trading atmosphere had become.

Philadelphia was also caught in the mania. "The city…for several days has exhibited the marks of a great gaming house," Benjamin Rush reflected. Widely circulated estimates that script would soon reach $500 and even $600 only exacerbated the enthusiasm. Even the boundary between figurative and literal mania was uncertain. Traders went for days without sleep, drinking too much and eating too little. Several men were even reported to have literally gone insane.

But who were these profit-mad traders to whom the newspapers and eyewitnesses referred? Previous historical analysis of Scriptomania assumes that elite investors drove the bubble of early August, but in fact many of the most prominent American investors saw the boom as unsustainable and remained on the sidelines. "[E]xorbitant prices which have been demanded for Bank Script, both at this place and New York…have exceeded any calculations that could possibly have been made with fairness," merchant Nalbro Frazier wrote from Philadelphia. "[We were well aware that a turn must very shortly take place and that when the bubble had got to its height, it wo[ul]d decline more rapidly than even it raised."

While few elites abstained from script completely, the asset comprised a minuscule part of their portfolios. Thus, when the market crashed on August 11, a wide separation existed between the moneyed elites and a new breed of middle- and

lower-class investor commonly referred to as "designing men" and "new adventurers."

Many of the "designing men" were former Revolutionary War officers trying to financially match the social status that came with their military rank. Expectations of a genteel officer class, inherited from British social tradition, weighed heavily on American veterans who, unlike their former British adversaries, became officers on merit rather than family wealth and prestige. In civilian life, many of these men had minimal wealth and turned to speculation to finance their place in the social elite.

Equally zealous were the "grocers, ship-keepers, sea captains and even prentice boys" who poured into the securities market. Reports of "[m]echanics deserting their shops" to speculate in script and US securities were commonplace in New York, Philadelphia and Boston. "[A] number of young and inexperienced adventurers have started up lately with us who were Scrip mad and several have suffered exceedingly," Philadelphia merchant Mordecai Lewis reported to his New York partner Nicholas Low.

These designing men and new adventurers were blindsided by the crash, but many of early America's most notorious speculators — including Frazier, Lewis, Low, Andrew Craigie, many members of the Livingston clan and even the legendary speculator William Duer — emerged from the chaos with minimal losses.

The collapse in script and US bond prices quickly affected the broader financial system. Credit markets froze and cash went into hiding. Asset values plunged as script and US securities were liquidated to repay loans. Fearing a complete economic meltdown, Hamilton took unprecedented action. The Treasury Secretary ordered a concentrated purchase of US securities — a $300,000 expenditure split evenly between New York and Philadelphia — to inject much-needed liquidity into the market. The plan was decisive, forceful and inventive, and it temporarily relieved the strain on the frozen credit system. However, despite Hamilton's efforts, investor confidence was deeply shaken and asset prices remained well below peak levels.

With prices so low, many of the nation's financial elites sensed an opportunity. Brokers like Low quickly organized pools to speculate in script. Prominent New Yorkers including Richard Platt, Duer and many others saw the opportunity as well and eagerly contributed the required $14,000 to join Low's fund. A flood of purchases made by short-sellers, recipients of government funds and speculative pools like Low's boosted script from a post-crash low of $154 on August 15 to $210 in New York a week later. Prices remained well above $200 through the weekend of August 27–28.

Yet the surge in the script prices did not coincide with a return to broader financial stability. Short-term credit was all but impossible to obtain by anyone except the elite investors who, because of their reputation and wealth, were widely considered the most creditworthy. Using their advantageous position in the credit market, members of New York's financial elite amassed huge, leveraged script holdings financed almost completely with high interest, short-term loans. This credit binge further destabilized a broader financial market still reeling from the August 11–12 crash. Uncertainty was pervasive,

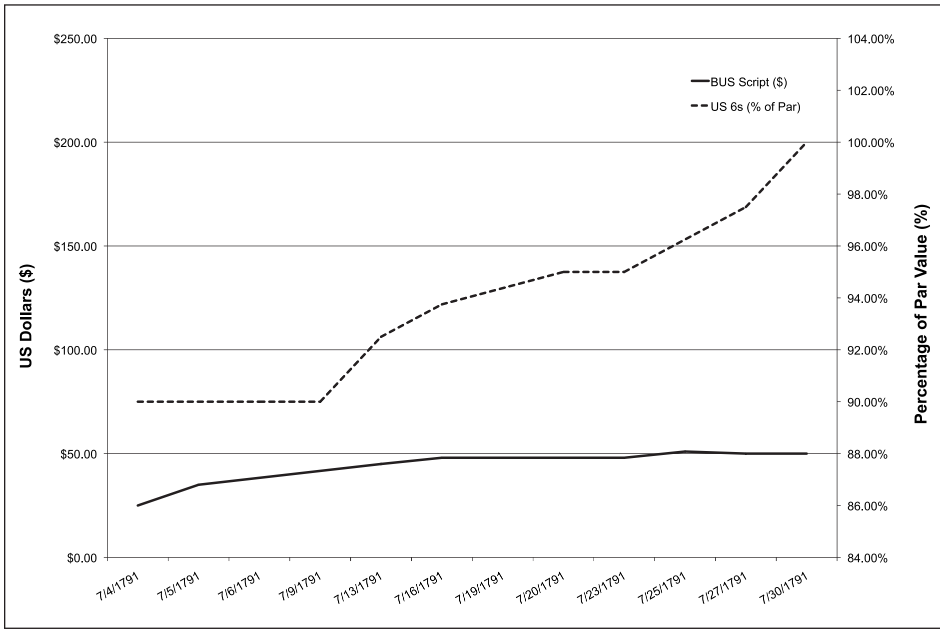

Figure 1. Market value of BUS script and US securities — Philadelphia, July 1791. Source: Sylla, Wilson, and Wright (2006), *Gazette of the United States* (August 1791), *The City Gazette, or the Daily Advertiser* (Charleston, South Carolina), Nicholas Low Collection, James O. Wettereau Collection.

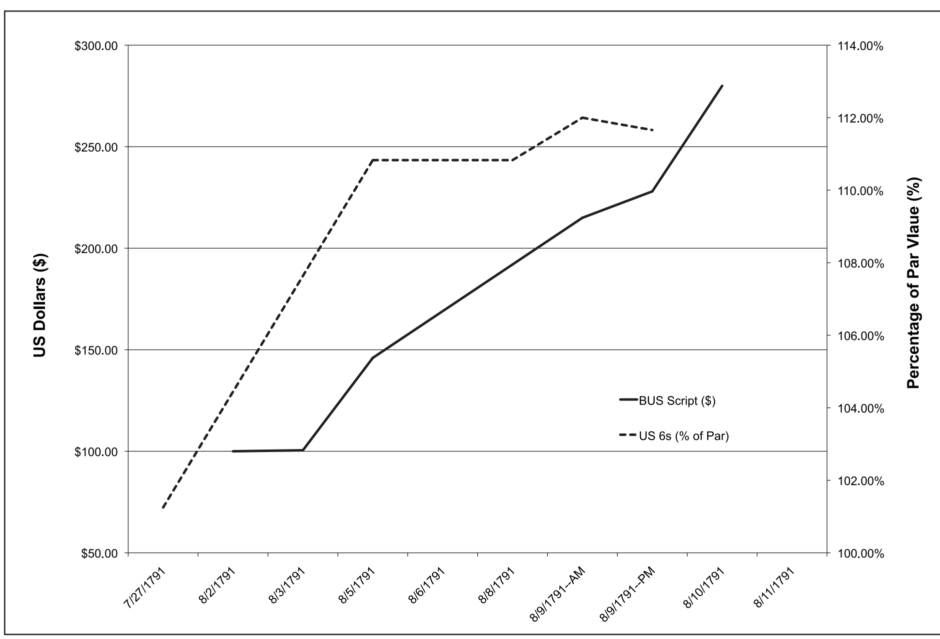

Figure 2. Spike in asset price values — New York City, July 27–August 11, 1791. Source: Sylla, Wilson, and Wright (2006), Philadelphia *General Advertiser* (August 1791), *New York Journal* (August 1791), *New York Daily Advertiser* (August 1791), *American Mercury* (August 1791).

and script was once again open to attack.

The last days of August saw "low volume and dull sales" settle over the financial markets until, in early September, script prices once again began to collapse. On Monday, September 5, script opened down 12.8% from the previous trading session and continued to fall throughout the day, closing at $140. US securities also came under heavy pressure. Hints of panic surfaced in New York as highly-leveraged script holders saw their assets' values shrink dramatically. Hamilton's agent in New York, Bank of New York cashier William Seton, believed the Treasury's previous liquidity injections fell "far short of preventing that universal panic and want of money which now prevails." Brokers were again liquidating script and US securities at steep discounts "merely to save credit," Seton reported — a fact that added to the already tenuous financial environment.

A mysterious indication of the pervasive uncertainty is found in a special notice in the September 5 editions of both daily New York City newspapers. "NOTIFICATION," the advert read, "THE Subscribers to the National Bank, and such other persons as intend to become Stockholders, are requested to meet at Corre's Tomorrow Evening, to determine on measures conducive to their mutual interest." The timing of the meeting, combined with its unprecedented nature, only reinforced the extraordinary circumstances at work on September 5.

While no known record of this meeting's agenda exists, it is likely that the subscribers gathered to discuss reports that the second crash was the work of an organized speculative attack. "The truth is that the fluctuations are principally owing to the arts and contrivances of mere jobbers and amongst these our friend [future Supreme Court Justice] Brockholst [Livingston] stands in the foremost ranks," New York lawyer and financial insider Robert Troup reported to Hamilton. "A few days ago a cursed scheme of depression was planned and executed under his immediate patronage as is universally said and believed."

While Livingston's precise tactics are unclear, his "cursed scheme" was devastatingly effective. Cascading liquidations forced New York script prices to a low of $110.25 at the noon auction on September 8, a 61.45% decline from its high of $286 on August 10. This was the lowest sale price in any city since the mania began in late July. Writing at the height of the sell-off, New York broker James Watson summed up the market's toxic environment: "Stocks of all descriptions fall — the urgency to cash is general."

Then, without warning, asset prices surged during the September 8 evening trading session. Script reached a high of $151 before settling at $135.25 and continued rising the following day, selling as high as $163. Unlike the previous crash, this rebound was not the result of a concentrated burst of speculative purchases. Instead, the abrupt turnaround on September 8 can be traced directly to the Secretary of the Treasury.

"The speculating mania has taken full possession of every moneyed soul!"

— New-York Journal, August 5, 1791

Far ahead of his time, Hamilton understood the complex interplay between the monetary and psychological causes of financial contagion. During the August crash, Hamilton had substantial resources with which he could reinforce liquidity-starved credit markets and restore investor confidence. A month later, however, a legal technicality, which Hamilton scrupulously honored, limited his war chest to a mere $50,000, less than 20% of the funds available to him in August.

Lacking monetary firepower, Hamilton leveraged his greatest asset — the financial community's faith in the Washington administration. In a stark departure from his insistence that William Seton covertly execute the Treasury's first round of bond purchases, Hamilton now urged his agent to signal the government's unwavering support for the financial system.

"You may however make it known that the Treasurer is purchasing here," Hamilton instructed Seton on September 7. The message was subtle but clear: investors could be assured that, if they were patient, sufficient liquidity would be made available.

As it happens, Hamilton's confidence play succeeded even before Seton received his orders. Seton recorded that "the bearer of the letter" — well-known Philadelphia businessman Thomas Eddy — "knew or conjectured at the Contents" and did not keep this information secret.

"It flew over the Town like Wildfire that I had orders to purchase," Seton wrote, marveling that much of New York's investor class knew about Hamilton's plan before he did. While it is unknown whether Hamilton encouraged Eddy to spread the letter's message "like Wildfire," it is clear that Hamilton facilitated a modest recovery before Seton spent a cent. Cash was certainly still needed — and was willingly dispensed by Seton — but the fear that gripped New York just days before quickly faded away (see Figure 3).

The market stability that Hamilton brought did not last long. Nine months later he was forced to execute a more expansive bond-buying program to quell the Panic of 1792. Yet the events of July, August and September 1791 represent a profound financial, economic and cultural moment in America's national development. Scriptomania was much more than a brief speculative mania — it was a complex financial crisis with a diverse set of causes.

Perhaps more importantly, Scriptomania reveals much about the nature of early American financial speculation. Contrary to the historical consensus, early American financial markets were not simply the playground of the financial elite. The revolutionary generation's democratic impulse spurred "grocers, shipkeepers, sea captains and even prentice boys" to vibrant, and eventually tragic, activity in financial markets. For the first time, the devastation of speculative failure — and the ecstasy of success — transcended American class boundaries on a large scale. In this way, Scriptomania was the first modern American financial crisis and paved the way for many more to come. **$**

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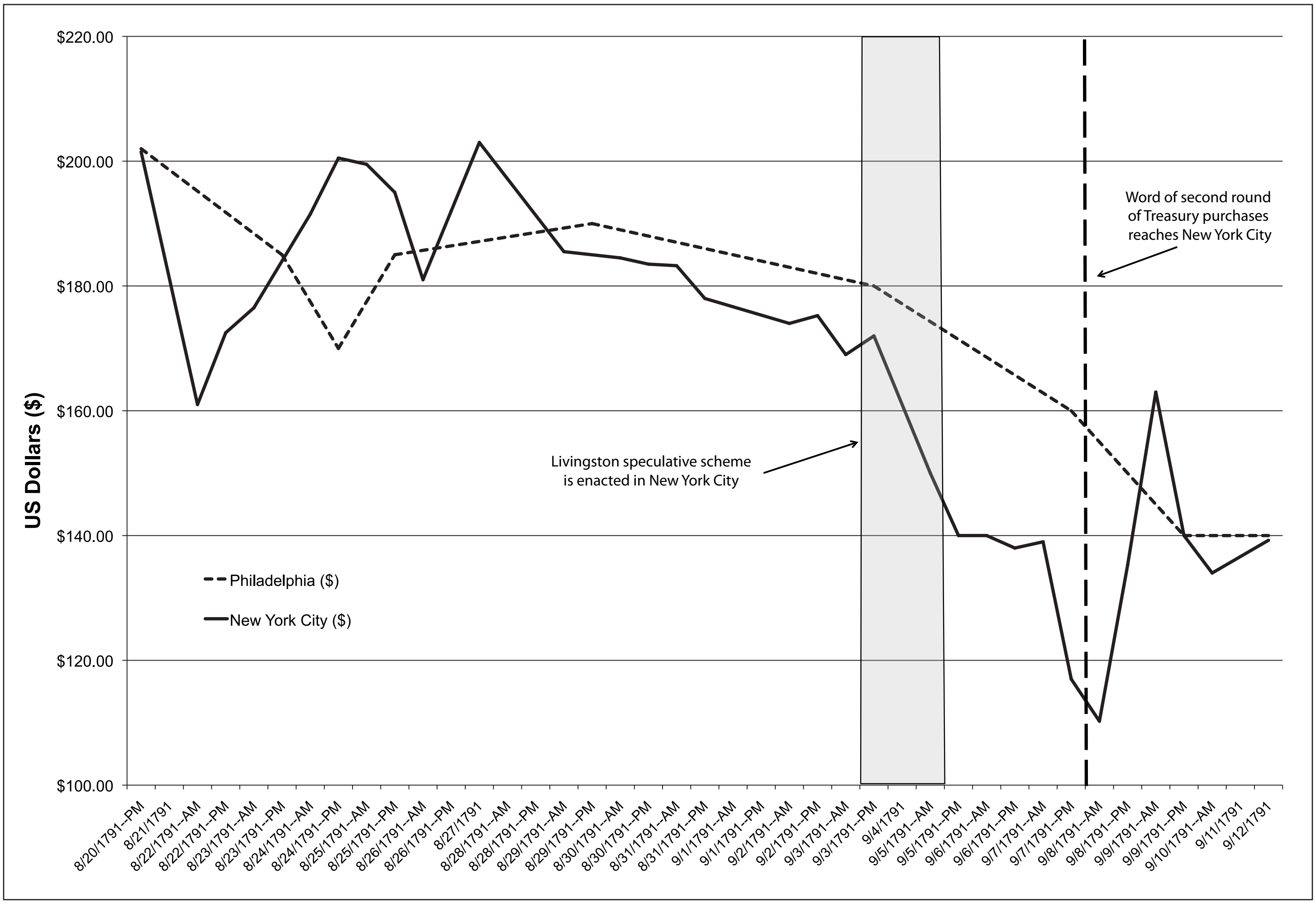


Figure 3. Progression of second market crash — New York City, August 20–September 12, 1791. Source: Sylla, Wilson, and Wright (2006), *New York Daily Advertiser* (August 1791), Jeremiah Wadsworth Collection, Nicholas Low Papers, Andrew Craigie Papers, James O. Wettereau Collection.

Sources

Andrew Craigie Papers. American Antiquarian Society. Copied James O. Wettereau Papers, Rare Book and Manuscript Library, Columbia University.

Butterfield, L. H. *Letters of Benjamin Rush. 1761–1792*. Memoirs of the American Philosophical Society 30/1. Princeton, N.J: Princeton University Press published for the American Philosophical Society, 1951.

Columbian Centinel. 2 July–10 September 1791. Boston, Massachusetts. Accessed at http://infoweb.newsbank.com.

Corner, George Washington, ed. *The Autobiography of Benjamin Rush; His Travels Through Life Together with His Commonplace Book for 1789–1813*. Westport, Conn: Greenwood Press, 1970.

Cowen, David J. *The Origins and Economic Impact of the First Bank of the United States, 1791–1797*. Financial Sector of the American Economy. New York: Garland Pub, 2000.

Davis, Joseph Stancliffe. *Essays in the Earlier History of American Corporations*. Harvard Economic Studies v.16. Cambridge: Harvard University Press, 1917.

Dunlap's American Daily Advertiser. 6 July–29 August 1791. Philadelphia, Pennsylvania. Accessed at http://infoweb.newsbank.com.

Gazette of the United States. 30 April–14 September 1791. Philadelphia, Pennsylvania. Accessed at http://infoweb.newsbank.com.

General Advertiser. 11 July–30 August 1791. Philadelphia, Pennsylvania. Accessed at http://infoweb.newsbank.com.

James O. Wettereau Papers. Rare Book and Manuscript Library, Columbia University.

Jeremiah Wadsworth Papers. Connecticut Historical Society. Copied James O. Wettereau Papers, Rare Book and Manuscript Library, Columbia University.

New York Daily Advertiser. 6 June–0 September 1791. New York, New York. Accessed at http://infoweb.newsbank.com.

New-York Daily Gazette. 24 June–10 September 1791. New York, New York. Accessed at http://infoweb.newsbank.com.

New-Jersey Journal. 10 August–27 August 1791. Elizabethtown, New Jersey. Accessed at http://infoweb.newsbank.com.

Nicholas Low Papers. Library of Congress. Copied James O. Wettereau Papers, Rare Book and Manuscript Library, Columbia University.

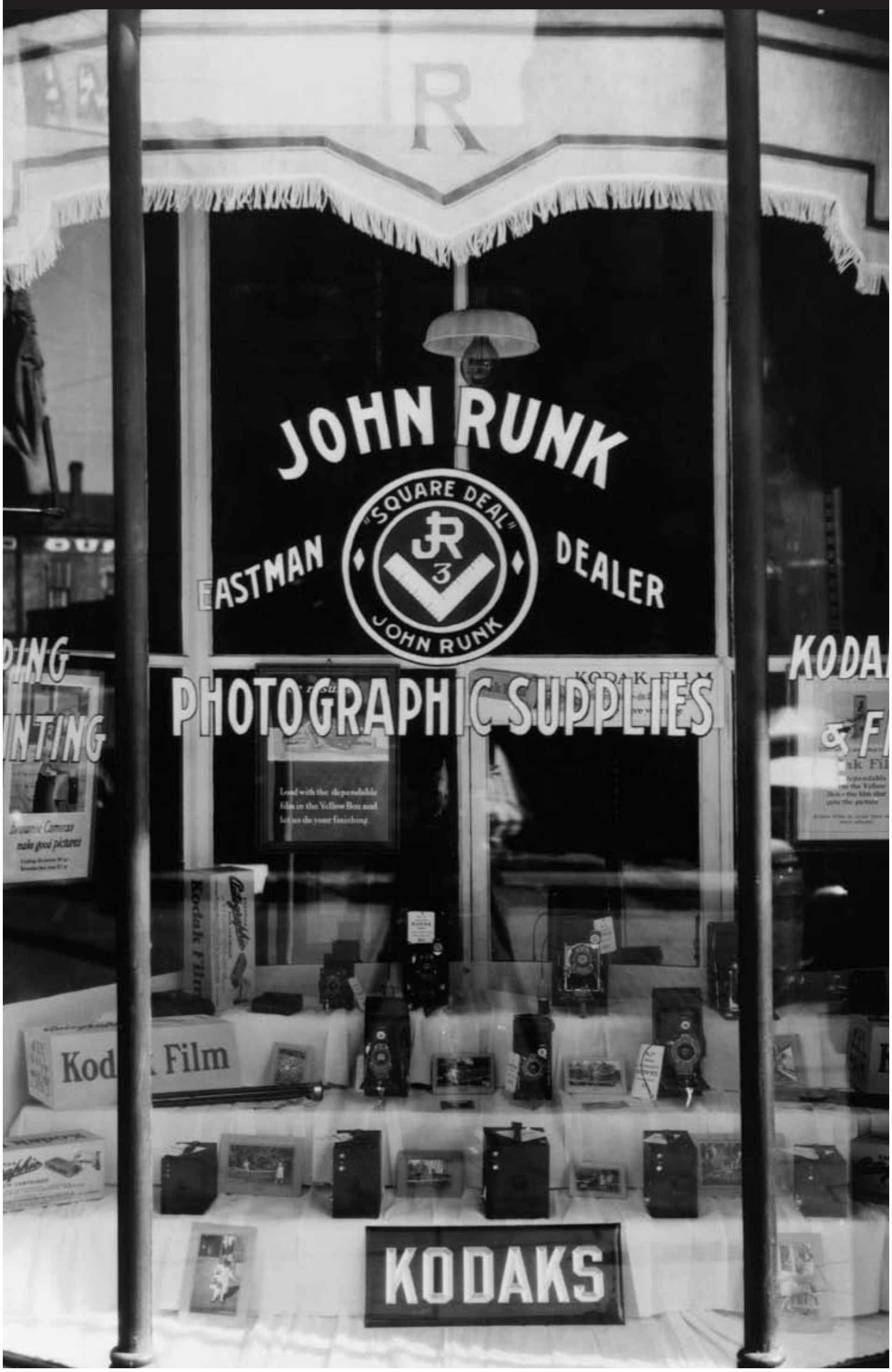
The Papers of Alexander Hamilton Digital Edition, ed. Harold C. Syrett. Charlottesville: University of Virginia Press, Rotunda, 2011.

Pencak, William, and Conrad Edick Wright, eds. *New York and the Rise of American Capitalism: Economic Development and the Social and Political History of an American State, 1780–1870*. New York, N.Y: New-York Historical Society, 1989.

Wettereau, James O. "New Light on the First Bank of the United States." *The Pennsylvania Magazine of History and Biography* 61, no. 3 (July 1, 1937): 263–285.

Wright, Robert E. *One Nation Under Debt: Hamilton, Jefferson, and the History of What We Owe*. New York: McGraw-Hill, 2008.

America's Early Venture Capitalists



By Michael A. Martorelli

The people who provided the initial funding for America's first industrial corporations can be called the nation's first venture capitalists, although that term was not coined until the 1930s. Since they were supporting the establishment of these companies as individuals, "angel investors" might be a more fitting term, though that phrase only dates to the 1920s. Whether one calls them angels or venture capitalists, the fact remains that dozens of individuals played important roles in helping well-known American entrepreneurs obtain seed financing for their companies in the 19th century.

The Industrial Revolution Comes to America

In 1812, Boston merchant Francis Cabot Lowell returned from a trip to England convinced he could improve upon the technology that had allowed that country to become the most powerful manufacturing nation on earth. British textile manufacturers made yarn in one place and wove it into clothing in another. Lowell intended to combine the spinning and weaving processes, and to power the mechanized operation of a textile mill with falling water.

In the winter of 1813, he solicited start-up money for his Boston Manufacturing Company (BMC) from four men. Three of them — Patrick Jackson, Uriah Cotting and Abbott Lawrence — were prominent businessmen interested in new endeavors that would enhance Boston's economic life. The fourth, Nathan Appleton, was a cousin who had met Lowell in England while visiting British textile factories. Later that year, the BMC secured additional equity financing from seven other partners.

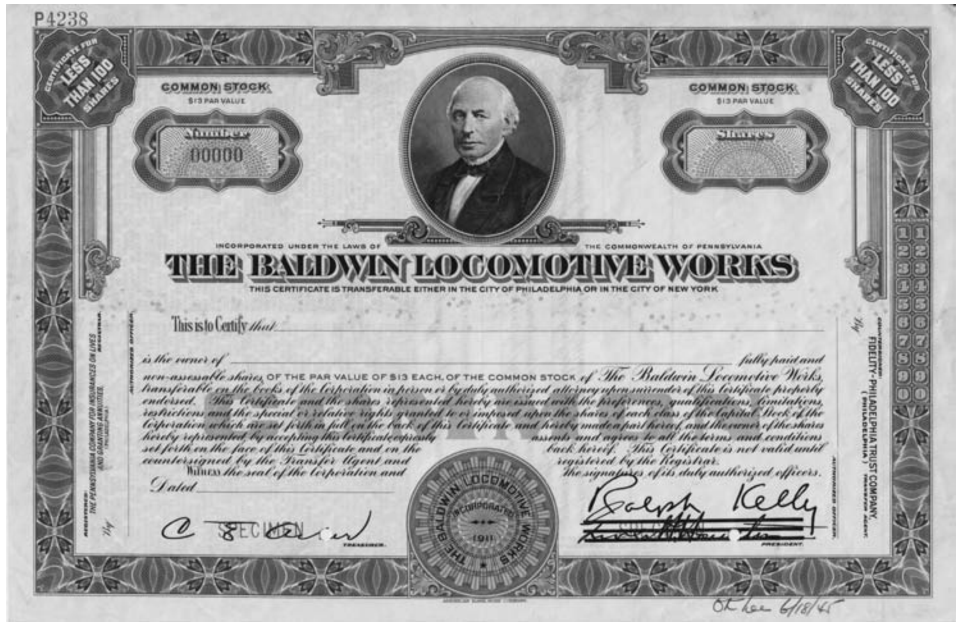
The company raised $100,000, nearly 10 times the capitalization of other companies operating small cotton mills. Lowell's Waltham, Massachusetts-based company was a spectacular success; and so was its method of financing. In 1822, the original investors in BMC formed another manufacturing company and selected a site on the Merrimack River for a larger factory

Kodak cameras displayed in front window of photographic supply store, circa 1925.

and a company town. They named the town Lowell in honor of the BMC founder who had died in 1817, using the proceeds from a public sale of stock to finance its construction and operation. Thus, Lowell became renowned as the birthplace of the American industrial revolution, and the joint-stock corporation became the method of choice for financing large American businesses.

In 1825, Matthias Baldwin extended his manufacturing career by opening in Philadelphia a company that specialized in constructing stationary steam engines. Within a few years, engineers in England and the US began adopting such machines to power locomotives on railroad tracks. Baldwin's expertise led to commissions to build first a miniature steam-powered locomotive for public display, and then a full-scale version for a Philadelphia railroad. He delivered the practical, but imperfect "Old Ironsides" in 1832.

By the end of 1834, Baldwin had built five more locomotives and was ready to expand to a new facility. The Panic of 1837 hurt business, and the company almost went bankrupt that year. After two lean years, Baldwin found new financial partners in George Huffy and George Vail and established the forerunner of what would eventually be named the Baldwin Locomotive Works. Huffy was a Baldwin employee who had advanced to the position of factory superintendent. Vail's family owned the ironworks that had built the first steam engine to power a ship across the Atlantic Ocean. Patents, technological improvements and the recovering economy helped the company survive the withdrawal from the partnership of both Huffy and Vail. Asa Whitney provided new financing from 1842-1846. By then, the company had built a reputation as one of the leading locomotive manufacturers in the world. It continued to prosper for more than six decades after the 1865 death of its founder and succumbed to bankruptcy and reorganization in 1935 in the midst of the Great Depression.



Specimen stock certificate from The Baldwin Locomotive Works, 1945.

Collection of the Museum of American Finance

Recipe book published by The Borden Company, circa 1920s.

Collection of the Museum of American Finance

Making Guns and Butter for the US Army

Samuel Colt received a patent for the first revolving cylinder pistol in 1836 and immediately sought to raise money to construct a factory. His cousin, Dudley Selden, helped him raise $230,000 from other family members and wealthy New York investors; it was enough to establish the Patent Arms Manufacturing Company in Paterson, NJ. Sales were almost nonexistent. The Panic of 1837, the pistol's unusual design and Colt's own profligate spending were the downfall of the company, which shut its doors in 1843.

Happily for the inventor, a Texas Ranger who had used Colt's early pistols sought him out in 1847 in order to purchase more guns to use in the Mexican-American War. With the money from two 1,000-gun orders and a loan from his banker-cousin Elisha, the inventor built a new factory for Colt's Patent Fire-Arms Manufacturing Company in Hartford, CT. Its first "Whitneyville-Hartford-Dragoons" became quite popular, as did subsequent versions of the Colt revolver the company continued producing throughout the next several decades.

By 1856, Gail Borden had had semi-successful careers in newspaper publishing, politics and food manufacturing. His most significant achievement had been the development of a concentrated beef biscuit which would not spoil when taken along for sustenance on long journeys. It was endorsed by the US Army and was used by explorers on Arctic expeditions and travelers crossing the American plains. It won a gold medal at the 1851 Great Council Exhibition in London.

Since Borden spent lavishly to market his new food product, he was not able to make money from that creation. During the early 1850s, Borden began experimenting with a process for condensing milk by vacuum. He was granted a patent for that process in 1856. His previous financial troubles led Borden to seek investors to help commercialize this new product. James Bridge of Maine and Thomas Green of Virginia acquired portions of Borden's patent and his fledgling company in Wolcottville, CT. Condensed milk was only moderately successful.

The partners closed the factory only a year after opening it. The inventor convinced them (along with new partner Reuel Williams) to build another factory in Burrville, CT in 1857. The new endeavor also struggled to break even. The company's fortunes changed in 1858 when Borden met New York financier Jeremiah Milbank on a train. Milbank invested $100,000 and became Borden's 50/50 partner in the New York Condensed Milk Company. Sales began to improve, prompting the company to build a larger factory in 1861 in Wassaic, NY. The company was in a perfect position to benefit handsomely from the Army's demand for condensed milk during the Civil War. The renamed Borden Company continued to prosper well into the 20th century.

Certificate for 20,000 shares in Sears, Roebuck and Co. issued to Julius Rosenwald, December 12, 1904.

Collection of the Museum of American Finance

Providing the Backbone of the New Economy

In 1859, 20-year-old John D. Rockefeller joined neighbor Maurice Clark in putting up $2,000 for half ownership in the merchant and commodity trading firm Clark & Rockefeller. It was the first of five companies the legendary entrepreneur organized but only partially financed. His first business did very well, enabling its two partners to expand into the new business of oil refining. In 1863, Clark's two brothers and the chemist/oil refiner Samuel Andrews provided additional funding to build a refinery in Cleveland, OH and create Andrews, Clark & Company. This business also prospered.

In 1865, Rockefeller engineered a surprise takeover of the Clarks' interests for $72,000. Two years later, the renamed Rockefeller & Andrews acquired a nearby refinery that Rockefeller's brother, William, built. The company obtained the $100,000 in financing from Henry Flagler; he had been a Rockefeller acquaintance and fellow grain merchant before opening an oil barrel manufacturing business in 1865. Rockefeller's brother-in-law, Stephen Harkness, also became an investor and silent partner in the newly-constituted Rockefeller, Andrews & Flagler oil refining company. In 1870, those partners, along with another Rockefeller in-law, Oliver Burr Jennings, became the six initial stockholders in the joint-stock corporation Standard Oil. It soon came to dominate the oil industry.

Andrew Carnegie was perfectly willing to attach the name of David McCandless to his fledgling steel company in 1872. For most of the previous 17 years, Carnegie had been combining his own funds with those of others to invest in firms benefitting from the emergence of the railroad as the country's most powerful engine of economic development. Thus, Carnegie shared in the financial success of Adams Express, Keystone Telegraph, Pullman Palace Car, Keystone Bridge Company and Union Iron Mills before becoming enamored with the prospects for the Bessemer process of making steel on a visit to England in 1872. He had tried unsuccessfully to use that process back in 1866 while exploring the use of steel to replace iron in the bridges being built across the Mississippi River.

In November 1872, Carnegie put up $250,000 of his own money and raised another $450,000 from his Union Iron Mills partners (brother Tom, Andrew Kloman and Henry Phipps), Tom's father-in-law (William Coleman), the vice president of the Allegheny Valley Railroad (William Shinn) and a prominent Pittsburgh businessman (the aforementioned McCandless). The company built its new facility on the Monongahela River just

east of Pittsburgh, PA. Two years later, the owners renamed their company the J. Edgar Thomson Steel Works Ltd., paying homage to the recently-deceased president of the Pennsylvania Railroad and an early Carnegie mentor. It became the main asset of Carnegie Steel, the holding company that was organized in 1892 and sold to J.P. Morgan to become part of US Steel in 1901.

Serving the Emerging Desires of Consumers

While Alexander Graham Bell was working on the development of the telephone, he was also trying to teach deaf-mute children to speak, using what he termed the "visible speech" alphabet. Thomas Sanders and Gardiner Hubbard were the fathers of two of his pupils. The teacher lived with the Sanders family in Salem, MA. Hubbard was a lawyer in Boston and was early to recognize the potential commercial utility of Bell's harmonic telephone. In February 1875, Bell, Hubbard and Sanders signed a Patent Association agreement; Bell would continue to develop his invention in a workshop in Boston, while Hubbard and Sanders would give him financial support. After the inventor demonstrated his telephone's success in March 1876, Hubbard became the device's most ardent promoter.

For most of the next two years, Sanders continued to provide Bell with financial support, while Hubbard helped him place several thousand telephones in businesses around the country. In July 1877, the three men organized the Bell Telephone Company; they brought in Bell's assistant, Thomas Watson, and two of Hubbard's relatives as shareholders. The public reception to this new device was lukewarm, aided no doubt by the disdainful comments from the management of the Western Union Company.

In 1878, however, one of that firm's subsidiaries replaced its telegraph machines with telephones. That corporate giant soon threatened to overwhelm its much smaller competitor. By February 1879, Hubbard and Sanders had exhausted their financial resources. Thus, they relinquished control of the company to a group of Boston-area friends and relatives. Charles Bradley, Alexander Cochrane, William Saltonstall and Richard Fay added $50,000 to the reorganized firm's treasury. That injection of capital enabled the company to support its growing business. Perhaps more importantly, later that year Western Union abandoned its challenge to Bell's patents. That action paved the way for reincorporation of the American Bell Telephone Company, which soon had its device in more than 2,400 cities and towns.

George Eastman was a bookkeeper at the Rochester Savings Bank in 1877 when he bought a camera to take pictures on a trip to Hispaniola. He never made it to that island, but he became intrigued with the camera and worked hard to master it. He read about a British idea of using chemical-laden dry plates to replace the cumbersome and problematic wet plates then in use by virtually all photographers. In 1880, he began to produce dry plates in commercial quantities, helped in large part by an investment of $1,000 from Henry A. Strong, a buggy whip manufacturer who rented a room in the house Eastman shared with his widowed mother. Buoyed by another $5,000 investment from Strong, Eastman quit his job at the bank in September 1881 and began devoting all his time to the Eastman DryPlate Company.

In 1884, he figured out how to replace glass plates by putting the required chemicals on a roll of lightweight paper that could be rolled onto a spool. Camera designer William H. Walker and other investors supplied $300,000 to establish the new Eastman DryPlate and Film Company, with its major product being the new photographic film. Two years later, the company began providing a film development service for its customers. And in 1888, Eastman combined a simple box camera, a pre-loaded roll of film capable of taking 100 pictures, an unusual brand name (Kodak), a film-development service and an ingenious advertising slogan (You push the button, we do the rest) to create one the most successful consumer products of all time. The Eastman Kodak Company (renamed in 1892) continued to produce various types of cameras and film for more than a century.

Richard Warren Sears was a freight agent in Redwood Falls, MN in 1886 when he agreed to purchase a shipment of pocket watches that had been refused by the addressee. He made such a tidy profit by selling them to other agents along the line to Minneapolis that he ordered more from the Chicago manufacturer and repeated the process several times. Within a year, he moved to Minneapolis and established the R.W. Sears Watch Company. This innovative merchant-at-heart advertised his watches in Chicago newspapers and built a thriving business. In March 1887, he moved his enterprise to that expanding city. When he advertised for a watch repairman, he met and hired Alvah Curtis Roebuck, who had been repairing watches in nearby Hammond, IN. The company advertised its watches and other jewelry in a mail order catalog aimed largely at farmers.

During the next few years, the company added both pages and items to its popular catalog. By 1893, the renamed Sears, Roebuck and Company was selling a wide variety of merchandise from its 322-page book. In 1895, Roebuck was suffering physically from the pace and stress of the business. He offered to sell his interest in the company back to his partner. Sears couldn't fund the $25,000 purchase with his own money, so he offered a partial interest in the company to Aaron Nusbaum, a manufacturer of pneumatic tube systems used in department stores. Nusbaum offered part of his interest to his brother-in-law, Julius Rosenwald, a manufacturer of men's suits. The two men helped buy out Roebuck and add $50,000 to the company's treasury. Investor Rosenwald joined the company in 1896. In 1901, Sears and Rosenwald bought out Nusbaum. After evaluating additional sources of capital in 1906, Sears, Roebuck floated one of the first public stock offerings of a retail company. **$**

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Sources

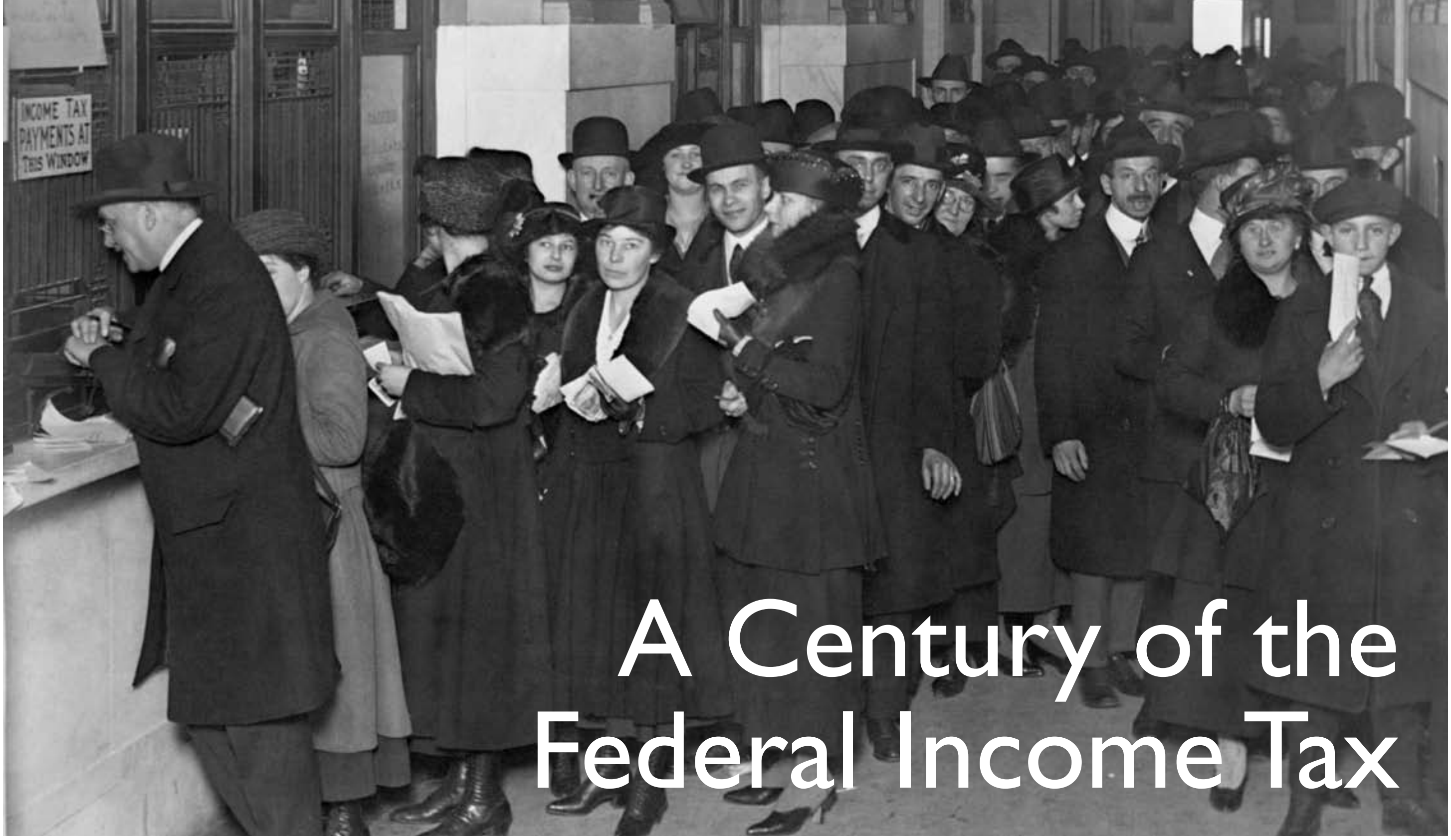
Brooks, John. *Telephone, The First Hundred Years*. Harper & Row: New York. 1976.

Chernow, Ron. *Titan, The Life of John D. Rockefeller*. Random House: New York. 1998.

Morris, Chester. *The Dawn of Innovation*. Public Affairs: New York. 2012.

Morris, Chester. *The Tycoons*. Henry Holt and Company: New York, 2005.

Nasaw, David. *Andrew Carnegie*. The Penguin Press: New York. 2006.



A Century of the Federal Income Tax

By Matthew Cowen

This year marks the centennial anniversary of the US federal income tax, but its history can be traced as far back as the 18th century. In *Federalist Paper* No. 12, Alexander Hamilton asserted that the country could make more revenue if taxes were collected at the federal, rather than state, level. The reason, he argued, was that the national government could worry about protecting one border, while the states would have to guard many borders. At the same time, Hamilton stated that the government would make its revenue largely from indirect taxes, such as imports and duties, rather than direct taxes on the income and earnings of its citizens.

In *Federalist Paper* No. 34, Hamilton maintained that the power to tax American citizens should lay more with the federal government than with state governments. He wrote, "A concurrent jurisdiction in the article of taxation was the only admissible substitute for an entire subordination, in respect to this branch of power, of State authority to that of the Union."

In the Constitutional sense, direct taxes are those imposed on income and earnings. Indirect taxes, or excise taxes, are those placed on goods and services, collected by a producer or retailer, and not paid directly to the federal government by a consumer. Following the plan Hamilton laid out in the *Federalist Papers*, the first Congress would pass, and President George Washington would sign, the Tariff Act on July 4, 1789, which sanctioned the collection of tariff duties on imported goods. Up until the Civil War, tariffs were the source of 80-95% of all federal revenue. In fiscal year 1790, the federal budget was set at $4.6 million, and (per the 1790 US census) the US population was approximately four million. Thus, an income tax of just over $1 on each person in the country would fund the government's entire budget. However, a federal income tax was unnecessary because the excise taxes covered the federal government's expenses.

With the outbreak of the Civil War, Congress needed a new way to generate revenues; thus, with the passage of the Revenue Act of 1861, the first iteration of the federal income tax was born – a 3% flat tax on all income greater than $800. Section 49 of the Act states that "From and after the first day of January next, there shall be levied, collected and paid, upon the annual income of every person residing in the United States, whether such income is derived from any kind of property, or from any profession, trade, employment or vocation carried on in the United States or elsewhere, or from any other source whatever, if such annual income exceeds the sum of $800, a tax of three per centum on the amount of such excess of such income above $800."

The following year saw the repeal of the Revenue Act of 1861 and its replacement with the Revenue Act of 1862. The new Act replaced the income tax system with a progressive tax of 3% for individuals whose income was between $600 and $10,000 and 5% for individuals whose income exceeded $10,000. At the same time, the Act created the Office of the Commissioner of Internal Revenue, who was appointed by the President and responsible for "preparing and distributing all the instructions, regulations, directions, licenses and forms pertaining to the assessment and collection of the duties, stamp duties, licenses and taxes, which may be necessary to carry this Act into effect." This office was the predecessor of the Internal Revenue Service (IRS).

Upon the conclusion of the Civil War, there no longer existed such a pressing need for revenue generation, and Congress therefore allowed the income tax law to expire in 1873. The income tax would not be revived until 1894, with the passage of the Wilson-Gorman Tariff Act. This Act

Crowds standing in line to pay their federal income tax at New York's Customs House, circa 1915.

reduced US tariff rates and established the first national peacetime income tax in order to make up for the loss in revenue that would coincide with lower excise tax rates. Although many Republicans, including President Grover Cleveland, opposed the establishment of a peacetime income tax, the bill became law without the President's signature because Cleveland thought an income tax was a worthy concession for lowering tariff rates. The Wilson-Gorman Tariff Act of 1894 called for a 2% tax on income over $4,000.

In 1895, *Pollock v. Farmers' Loan & Trust Co.* was a landmark Supreme Court case which ruled the Wilson Act to be unconstitutional, striking down the income tax. The case revolved around Charles Pollock, a Massachusetts stockholder employed by the Farmers' Loan & Trust Co., who appealed to the Supreme Court after unsuccessfully attempting to persuade district courts that the company had undermined his investment by paying an income tax on its dividends. Pollock felt the tax applied on the Farmers' Loan & Trust Co. was a direct tax because it was levied on profits made off of New York City real estate, and thus was a direct tax on the property itself. The Supreme Court agreed with Pollock that the tax was, in effect, a direct tax on the property, and therefore needed to be apportioned amongst the states in correspondence with their population as a percentage of the national population, per Article I, Section II, Clause III of the US Constitution.

Pollock v. Farmers' Loan & Trust Co. brought to the surface a schism between the legislative and judicial branches of the federal government over the topic of income taxes. The Supreme Court did not rule that every kind of income tax was a direct tax. Instead, the Court said that while income taxes are generally of the indirect variety, which are authorized in the Constitution, the taxes on interest, rents and dividends under the Wilson Act of 1894 should be viewed as a direct tax on property rather than as an indirect tax. Thus, a national income tax would cease to exist for the following 18 years, until there was requisite support for an income tax amendment that would allow the tax to be free of the burden of apportionment.

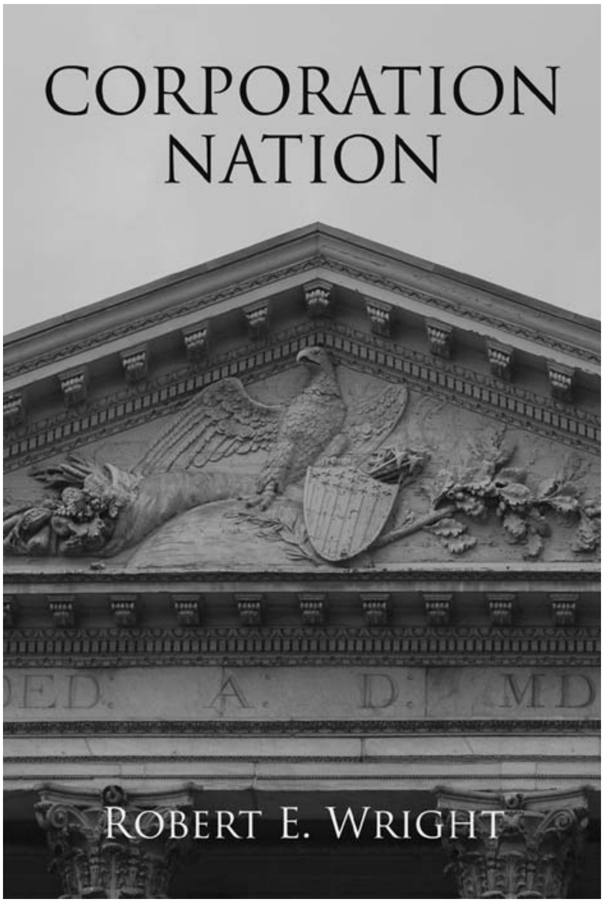
That support finally came in 1913, when Congress passed the 16th Amendment to the United States Constitution. The Amendment was just one sentence: "The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration." These 30 words contain a message that changed the relationship of the United States government with its people.

The first federal income tax that came into effect as a result of the 16th Amendment imposed the highest marginal tax rate of 7% on incomes that (in 2012 dollars) were $11.5 million and up. The lowest marginal tax rate was 1% on incomes ranging from $0 to $463,000. These filings were equal for married couples and single filers.

Today, the highest tax rate is 39.6% for individuals making at least $400,000 and married couples with a joint income of at least $450,000. One hundred years ago, these same earners would be taxed 38.6% less than they are today. $

Matthew Cowen is a student at Northwestern University. He researched and wrote this article during his internship at the Museum in Spring 2013.

Corporation Nation



By Robert E. Wright, University of Pennsylvania Press, 2013
328 pages with illustrations, notes and index
$69.95

We once knew what to teach students about financial development and its regulation. Once upon a time (say, the time of Jay Gould and the Robber Barons), the narrator would begin, there were worrying signs of American prosperity being compromised by defects in its corporate governance system. Gradually in the 20th century things improved, confidence in the fairness of equity investment grew and corporate ownership was democratised. Among the heroes who controlled the villains were certified public accountants providing more accurate auditing for shareholders and investment bankers providing diligent information signalling on the IPOs they underwrote. The NYSE listing committee increasingly required the publication of accounts and restricted anti-investor voting rules. Corporate governance codes, concerned institutional investors and proxy battles increased pressure on outside directors to raise their monitoring game. And, of course, government backed these efforts, for example, through the SEC's oversight of securities markets from 1934 and other supportive legislation.

This Panglossian view, of course, always attracted some skeptics, and even those peddling it were aware of its flaws: none of these mechanisms worked perfectly. More recently the downside has received stronger billing: the Global Financial Crisis was not kind to the reputations of accountants, the NYSE, investment bankers or government.

Robert Wright, in his new book *Corporation Nation,* is even more robustly irate about the long-run decline in standards, which he dates from the 1860s, seeing many of the later "improvements" as dead ends that were suppressed, as palliatives that merely increased the intensity of the developing disease or as simply lucky in coinciding with other developments which led to high investor returns for reasons unconnected with the reforms.

The originality of the book derives from Wright's juxtaposition of the modern debate on corporate governance with his own intimate knowledge of 19th century literature and case law and a major new database (which he has developed under an NSF grant with Professor Richard Sylla of the NYU Stern School of Business), documenting incorporations in the US between 1790 and 1860. He uses this database, assembled from state archives, in full debunking mode. Quality corporate management developed in such corporations before Alfred Chandler famously diagnosed it. That included not only banks, turnpikes and railroads, but also the many manufacturing corporations that were formed in the antebellum period.

Moreover, incorporations were strong in the slaveholding South as well as the liberal Northeast. In the course of his masterful story of American corporate developments, he shows better than anyone why it was unique on so many dimensions. The newly-independent American republic of course hosted doubters about corporations, and lawmakers took firm control of the privilege of incorporation, sometimes for their own ends. However, far from this making it hard to incorporate, as in Europe, Americans incorporated so promiscuously that they soon had more corporations than any other country.

These were small (by modern standards) and competitive, but able to achieve significant economies of scale and integration, and, importantly, were well governed. Wright is too good an historian to believe that all was perfect in this corporate Garden of Eden (chapter 7 gives full disclosure on its many pre-1860 serpents), but insists that the balance of power between shareholders and directors established in corporate charters was then no mere empty form. Governance problems were substantially resolved by those with most interest in doing so: the shareholders themselves.
Not all readers will agree with the radical corporate governance reforms that he concludes are now necessary, but all can benefit from the unique long-run perspective on reform that this major new historical study offers. $

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Educators' Perspective

continued from page 12

administration and later under the Arthur administration, as well as his service as US minister to Great Britain. He performed these duties quietly and competently without drawing attention to himself.

He ran the Pullman Company in the same way, but when the opportunity came for Lincoln to rise above it all and seek the greater good as his father had, he was unable to shed his Victorian mores and lead as a visionary. Such an opportunity arose when the poor working conditions of Pullman porters were brought to light by the 1904 publication of a pamphlet entitled *Freemen Yet Slaves under 'Abe' Lincoln's Son, or Service and Wages of Pullman Porters*.

George Pullman began hiring former slaves to work as porters on his passenger cars shortly after the Civil War ended. Although the former slaves welcomed the work, they often toiled under degrading conditions and were forced to rely on tips to make ends meet.

When Robert Lincoln was at the helm of the Pullman Company, many of the porters were sons of slaves who expected more from the company than their fathers had, but Lincoln refused to support any attempts by the porters to improve their working conditions. This frustrated the porters because while the company was only too willing to use Lincoln's name to bolster the company's image, Lincoln himself simply failed to act on their behalf.

Author Larry Tye, who interviewed several porters, writes of one family of porters who believed that Abraham Lincoln "freed Negroes like them only to have his son exploit them. They revere the father as the slayer of chattel slavery but revile the son for personifying industrial slavery."

Such judgment may be too harsh; nevertheless, Robert Lincoln's failure to act on the behalf of his company's porters is disappointing. Any positive action on his part in response to the situation would have served to further the cause of African Americans and done much to repair Lincoln's reputation as a cold, calculating businessman with racist tendencies.

Jack Lincoln's death changed the course of his father's life and set him on a successful career path that he may not have taken had Jack lived.

Earnings rose and dividends increased during Lincoln's tenure at the Pullman Company, but he was not prepared to champion the cause of workers in general or to help the very people his father had emancipated. He shared similar views on these issues with his fellow captains of industry, yet the son of Abraham Lincoln, rightly or wrongly, was judged by a higher standard.

Had he risen to the occasion, Robert Lincoln's legacy may well have approached that of his father's. **$**

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Sources

Chapin, John R. "The Infamous Pullman Strike as Revealed by the Robert Todd Lincoln Collection." *Journal of the Illinois State Historical Society (1908–1984)* 74, no. 3 (Autumn, 1981): 179–198.

Emerson, Jason. *Giant in the Shadows: The Life of Robert T. Lincoln*. Carbondale: Southern Illinois University Press, 2012.

Goff, John S. *Robert Todd Lincoln: A Man in His Own Right,*. Norman: University of Oklahoma Press, 1968.

Hutchinson, William T.,. *Lowden of Illinois; the Life of Frank O. Lowden.* [Chicago: University of Chicago Press, 1957.

Leyendecker, Liston E. *Palace Car Prince: A Biography of George Mortimer Pullman*. Niwot, Colo.: University Press of Colorado, 1992.

Nevins, Allan. *Henry White: Thirty Years of American Diplomacy,*. New York; London: Harper & Bros., 1930.

Tye, Larry. *Rising from the Rails: Pullman Porters and the Making of the Black Middle Class*. New York: Henry Holt, 2004.

HOW MUCH DO YOU KNOW ABOUT FINANCIAL HISTORY?

TRIVIA QUIZ

By Bob Shabazian

1. Bank of America, Hewlett-Packard and Alcoa were recently dropped from the Dow Jones Industrial Average. Name the three companies that replaced them.

2. How many years did it take for the Dow Jones Industrial Average to close above 15,000?

3. In 2013, Apple surpassed what company as the world's most valuable brand?

4. Name the company that General Motors replaced in the S&P 100 and 500 indices.

5. The median household debt for Americans 65 and older more than doubled to what level between 2000 and 2011?

6. In 1979, the *Guinness Book of Records* named what company as the largest department store chain in the world?

7. Maximum earnings subject to Social Security taxes increased from $110,200 in 2012 to $113,700 in 2013. How much in earnings was taxed when Social Security began?

8. In 1901, New York became the first state to require license plates for cars. What was the fee?

9. How many times did the S&P 500 register record closing highs between 1990 and 2000?

10. Government shutdowns are not new. How many shutdowns have there been since 1976?

1. Goldman Sachs, Visa and Nike.
2. 117 years. **3.** Coca-Cola, which held that distinction for 13 years. **4.** H.J. Heinz Co.
5. $26,000. **6.** F.W. Woolworth Corp.
7. $3,000. **8.** $1. **9.** 308 times.
10. 17, ranging in length from one to 21 days.

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